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A CRITICAL APPRAISAL OF PIERRE TEILHARD DE CHARDIN'S VIEW ON THE DISTINCTIVENESS OF THE HUMAN BEING IN THE LIGHT OF EVOLUTIONARY DEBATE

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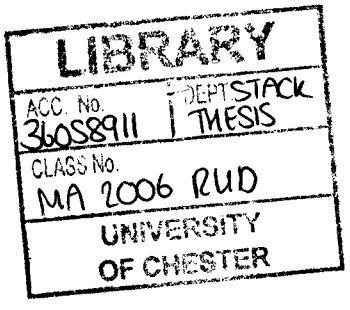

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When I consider your heavens the work of your fingers:
the moon and the stars which you have set in order,
what is man that you should be mindful of him: or the
son of man that you should care for him?
Ps. 8. 4-5.

Rudd, Ann

ABSTRACT

A CRITICAL APPRAISAL OF PIERRE TEILHARD DE CHARDIN'S VIEW ON THE DISTINCTIVENESS OF THE HUMAN BEING IN THE LIGHT OF EVOLUTIONARY DEBATE

A significant contributor to the ongoing debate between science and religion is Pierre Teilhard de Chardin (1881 –1955), a French Jesuit priest/theologian and palaeontologist. He perceived evolution to be a working-out of God's purposes in the world. He applies the concept of Darwinian evolution to his own particular notion of human development. Thus he presents a view of the cosmos and humanity's place within it which is original, radical and controversial. His work reflects the thinking of a visionary, a prophet, as well as effecting a synthesis between the biological sciences and Christianity.

This dissertation offers a critical appraisal of Teilhard de Chardin's views on human distinctiveness in relation to evolutionary theory of his time and at present. It is a book-based study, in part historical, examining and analyzing both a wide selection of Teilhard's works together with books and journals relative to the period and to the subject.

The key questions are: What is it to be human? What distinguishes us from the primates and from the rest of creation? These questions address not only the biological but also the spiritual development of human 'being'. The linking theme is one of emergence – of creativity, of consciousness and spirituality.

DECLARATION

This work is original and has not been submitted previously in support of any qualification or course.

Ann Rudd

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PREFACE

The purpose of this dissertation is to make a contribution to the dialogue between science and religion. The rapid advancement of scientific technologies produces new challenges to moral, ethical and theological thinking. Science alone cannot produce a total answer to the meaning of life. There is a depth of subjective knowing to which religion (in this dissertation, Christianity) may hold a key. J. Haught argues that both religion and science are distinct ways of reading the universe. The cosmos is narrative and different reading levels are required to realize truth.[1]

One of the characteristics of being human is that of reflection. We are self-conscious entities, self-aware. We ask why about our lives because we are drawn to seek meaning. This movement toward insight is rooted in the human drive to understand, to search for truth, to give deep meaning to our lives.[2]

The nature of truth is a huge issue. It may be perceived as multifaceted. Scientific truth and religious truth are not mutually exclusive; they complement each other. Both are true. Science is about how things happen. It is not certainty. It represents a provisional truth which later may be superseded. Religion is about why things happen and explores the meaning of existence in relation to a personal God and to community. This too is not certainty. Faith is about belief.

The question of what makes us human is significant with implications for the way we relate to each other and to God. Having spent four centuries taking the world apart to find out how it might operate, scientists in the twenty-first century are attempting to fit the pieces together. Does the whole appear to be greater than the sum of its parts? Are we inevitably human rather than a random product of evolution? [3]

A significant contributor to the ongoing debate between science and religion is Pierre Teilhard de Chardin (1881-1955), the French theologian and palaeontologist. He perceived evolution to be a working-out of God's purposes in the world. He was a visionary, a prophet perhaps as well as a scientist/theologian. His thinking is original, radical and controversial.

The main thrust of this dissertation presents a critical appraisal of Teilhard de Chardin's views on human distinctiveness in relation to evolutionary theory at that time and at present. The key questions are: What is it to be human? What distinguishes us from the primates and from the rest of creation? These questions address not only the biological but also the spiritual development of human being. The linking theme is one of emergence – of creativity, of consciousness, of spirituality. The study is limited to the texts in English and to the evolution of hominids only. No gender significance is implied in the employment of terms such as *man* and *mankind*. These terms relate to human beings/humanity only. The choice of subject is personal, grounded both in Christian and biological profession. The importance of engagement by strong and prophetic theological voices with the almost unrestrained attitude of science is crucial to the future of humanity.

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CHAPTER 1

THE IMPACT OF DARWIN'S THEORY OF EVOLUTION UPON PREVAILING THEOLOGICAL AND PHILOSOPHICAL VIEWS OF HUMAN DISTINCTIVENESS IN THE NINETEENTH CENTURY

There is a central question about the nature of human being: what is it to be distinctively human? It is a huge question and one which has long exercized the minds of philosophers, theologians and biologists. It has been approached from a number of different directions depending upon the persuasion of the proponent. Consequently there is overlap.

This chapter is introductory in nature. It presents an historical overview of the development of views regarding the nature of humanity. It tracks the concept of human distinctiveness from its inception in Greek thought, through the patristic period to the nineteenth and early twentieth centuries (Section 1.1).

Section 1.2 examines the question from the biological point of view. In 1859 Charles Darwin published *The Origin of Species*, followed in 1871 by that of *The Descent of Man*. These books had a critical impact upon contemporary views about the nature and origin of humanity. Reaction to Darwin's theory of evolution and the resulting controversies are discussed briefly in Section 1.3 of the chapter.

1.1 *What is so Special about Homo sapiens?*

The Christian tradition grounds itself largely in the accounts of creation found in the book of Genesis. Humanity is the height of God's creation, set over and above the animal kingdom. The key text to a Christian understanding of human nature is Gen. 1. 27: *So God created in man in his own image, in the image of God*

he created him .... (NIV). From this description has derived the doctrine of *imago Dei,* 'image of God'. In what does this image consist? [1]

D. Migliore writes that according to some interpreters human beings in their upright stature have a physical resemblance to God. He does not agree:

> Some passages of the Bible are strikingly anthropomorphic in their depiction of God (e.g. Gen. 3. 8ff). However, with its more characteristic emphasis on the transcendence and hiddeness of God, the Old Testament lends little support to the notion of a physical resemblance between God and humanity and indeed explicitly forbids the making of all images of God (Exod. 20. 4).[2]

Old Testament writers used their personal experience and the best attributes of humanity to draw their pictures of God. The full revelation of the divine in the person of Jesus Christ was required before humanity began to perceive what 'image of God' might mean.

The dominant Western interpretation of *imago Dei* is that it resides in the capacity to reason. Man is a reflective animal possessed of self-awareness, consciousness and rational thought. In the view of certain classical theologians, particularly Thomas Aquinas, human rationality is participation in and reflection of the divine logos by which the world was created.[3] Aquinas drew on the insights of the Greek philosophers Plato and Aristotle. [4] He developed a distinctive philosophy of the mind, central to which is the rational soul (*anima rationalis*): *soul* rather than mind (*mens*). In the possession of soul human beings have a "...uniquely problematic status among creatures".[5] They are corporeal and spiritual beings.

It was Plato who perceived reason or mind *(nous)* as that which made human beings capable of responsible action. He envisaged the soul as an immortal entity imprisoned within the body and awaiting liberation from it. Aristotle similarly identified the mind as that which triggers human capacities for action. "The genuinely human is (also) *relational*: the humanity of humans emerges in

collaborative groups, especially that of the family and the city state". [6] A. C. Thistleton cites Reinhold Niebuhr who observes that:

> "Man ...shares his social character with some animals who live in herds and with insects in hives.... His rational character is uniquely human.[7]

'Man is by nature a political and social animal'. He uses reason and faculty of speech to co-operate in building political communities that respond to the needs both of the group and of the individuals within it.[8]

One might query whether human beings are truly in control of their actions. Are we free to make our own destinies? "Aquinas responds affirmatively and emphatically: 'The very fact that the human being is rational necessitates it being characterized by free decision *(liberum arbitrium)* .' " [9] The division of body and mind or soul gave rise to a dualism which has permeated western traditions from Plato to Descartes and Kant. Some Christian writers from the very first defended our psychosomatic unity. We are embodied creatures. We think and act through the corporeal medium. The body is no prison (see Plato above, p.2). It is the means through which our humanity finds its expression.[10]

Another distinction was drawn during the early patristic period between the two phrases 'image of God' and *'likeness'* of God' (see Gen. 1.26). Tertullian (c. 160-c. 225) declares that to be made in God's image and likeness is "...to possess reason in yourself who are a rational creature made by a rational Creator":

> He returns to a dualism which gives privilege to reason in defining the human. He identifies also the role of dominion over all things given to humankind along with the soul breathed into it by God.[11]

According to Tertullian humanity retained the image of God after the fall. It could be restored to the likeness of God only through the renewing activity of the Holy Spirit. Origen (c. 185-c. 254) took a similar stance. *Imago Dei* referred to humanity after

the fall, whereas the term 'likeness of God' referred to the human condition after perfection at the final consummation.[12]

Dominion over the rest of creation derives also from Gen. 1. 26: *...let them rule over ... all the earth ... and all the creatures ....* This is interpreted as a special status, a grace bestowed on humanity by God, to be responsible stewards for his creation. It is not license to do as we wish regardless of the consequences.

Augustine of Hippo endorses these interpretations. "The image of the creator is to be found in the rational or intellectual soul of humanity ... (which) has been created according to the image of God in order that it may use reason and intellect in order to apprehend and behold God." [13] He emphasizes relationality with God as the goal for humanity: *... You have made us for yourself and our heart is restless until it finds its rest in you.* Aquinas agreed that all human beings by nature desire to know and that it is desirable for each entity to be united to its source or principle since this brings perfection. "Only by means of intellect is a human being united to its principle. Consequently the ultimate end for human beings consists in this union".[14] He continues: "God, as Creator, is the immediate origin of all things. Because he is the most perfect being, every creature naturally turns back to its principle. The end corresponds with the beginning. Therefore the final end of things is ... God alone."[15] For Aquinas the goal for humanity is perfect knowledge (attained through sensory experience) which is knowledge of the first cause, God. A. E. McGrath agrees. This world created by God, beautiful as it is, is a phase of transition only, not our true homeland:

> The doctrine of creation helps us to understand the deep human longing for transcendence .... (I)t also allows us to understand the human sense of wonder .... a clandestine longing for God, which is both triggered and heightened by the beauty of nature.[16]

McGrath asks why it is that the human mind is able to discern the patterning of the world. Can we posit a "...fundamental resonance between the rationality of God, the ordering of creation, and the ability of the human mind to comprehend ... something of the rationality of the world?" Is there a correspondence between the rationality of the cosmos and that of humanity? If not then the universe would surely be a complete mystery.[17]

Christian engagement with the natural world, especially in the early sixteenth and seventeenth centuries is rooted in this idea. Both Kepler and Galileo attributed the success of their respective astronomical theories to mathematical principle being grounded in the being of God.[18] If one accepts that humanity has been created in the image of God then within us there must be a deep God-shaped void, an 'abyss' as Blaise Pascal (1623-62) called it. For the French philosopher the human quest for happiness and fulfilment reflects an unacknowledged longing for God (see Augustine above, p. 4). We are meant to relate to God. This is not a delusion but a direct result of our divine creation.

This interpretation has been challenged. It has been called an invention, a coping mechanism. "The human mind ... is superbly capable of defending itself against thoughts that it finds troubling (for example) ... personal extinction and the meaningless of the cosmic void." [19] The German philosopher Ludwig Feuerbach (1804-1872) claims that humanity needs to find solace in thoughts of God and heaven. Such thoughts are fabrications – a desire to create meaning in a universe "...conspicuously devoid of purpose or goals." [20] Arguments of this sort reflect an increasingly secular influence on the concept of human distinctiveness. Kantian autonomy, for example, places the human self at the centre. Immanuel Kant (1724-1804) was able to fit both science and religion into his theory of knowledge. There is

no knowledge without experience. For Kant, "...the starting point of religion lies in our *sense of moral obligation*". [21] God is a postulate (a prerequisite) of the moral order and ethics consists in our duty to follow the moral law. Freewill, rational thought and morality are thus part of human uniqueness.

Karl Marx (1818-1883) presented secular views similar to those of Feuerbach. He ascribed the human longing for consolation to prevalent and unjust social and economic conditions:

> The miserable material situation of humanity was the direct cause of its spiritual yearnings. Abolish social and economic misery ... and people wouldn't need to dream of heaven anymore.[22]

Marx embraced the crude progressive scientific outlook, popular in the nineteenth century. "Religion is just the outmoded superstition which dulls the ability of the working class to rise up and overthrow the ruling class. It is the 'opium of the people' which enables them to endure their sufferings." [23]

Another facet of human distinctiveness was the development of the concept of personhood. What does it mean to possess personal identity? What makes us the unique individuals that we are? This tradition derives from classical discussions of the nature of the Trinity, three persons and one God, in the early church. It conveys the notion of relationality. We become ourselves through our relationship with others. It is other people who enable us to become persons:

> Both collectivist and individualist ... offer unsatisfactory concepts of individuality and personal being .... Individualism attempts to do full justice to personal freedom and autonomy .... Collectivism ... tries to take the role of social relations and institutions in human life seriously. This ... creates a deficient understanding of the individual for whom autonomy, freedom and independence from social structures become impossible.[24]

A. I. McFadyen cites Martin Buber, who extending Feuerbach's concept of 'I and Thou', constructs a description of personal being in terms of dialogue. McFadyen develops the concept to produce a personalist philosophy which is both dialogical

(formed through social interaction, address and response) and dialectical (never coming to rest in final unity, because one is never removed from relation). He comments that talk of human being "...has been so completely secularized that we find it increasingly difficult to talk of humanity with reference to God in a way which is meaningful in our contemporary human situation." [25] Here is the God-shaped void, the longing for transcendence described by A. E. McGrath (see pp. 4-5 above).

Karl Barth (1886-1968), the Swiss Protestant theologian and a contemporary of Pierre Teilhard de Chardin, addressed the 'God-shaped void'. He denounced all efforts to ground Christian faith on the basis of prevailing secular reason. This approach had failed. He was horrified by the support given by liberal theologians to war policy in 1914 and again in the 1930s:

> For Barth such attempts inevitably serve to compromise the true focus of Christian theology (i.e. the absolutely free God revealed in Jesus as capable of challenging and transforming the created order) by contrasting it with the terms of contemporary culture is such a manner as dulls its critical edge.[26]

A. C. Thiselton comments that only with the demise of Enlightenment rationalism and Kantian autonomy (which places human self at the centre) did Barth initially, then Moltmann, Jűngel and Wolfhart Pannenberg bring together rationality and temporality as being characteristic of the human.[27] What a human is cannot be fully understood without reference to human destiny and to God. Thiselton cites Pannenberg: "The emphasis is not on intellectual ability but on the destiny of fellowship with God and the position of rule associated with closeness to God." The human characteristic of bearing the image of God lies in "Being with others as others". Human identity presupposes a pattern of action that reveals character – responsibility in keeping promises for example, which entails both relationality and time (see note [27] above). [28]

1.2 *'Mr Darwin's Dangerous Idea'*

During the eighteenth century new patterns of thought developed. Successful methods in Newtonian physics were extended to other problems. The discoveries of Copernicus, Kepler, Galileo and Newton had led to the conception of the universe as a system of matter in motion governed by natural laws. The earth was a small planet rotating around an average star, not the centre of the universe. The realization dawned that this universe obeys immanent laws that can account for natural phenomena. Such phenomena could be predicted reliably whenever the causes were adequately known.[29] God was portrayed as a remote and impersonal clockmaker, the cosmic architect of deism, who wound up the clock of the universe and left it to tick away without further interference.[30] That God existed was not generally in doubt. How could he not exist when the universe had so evidently been designed? Mechanism presupposes contrivance, a sense of purpose, an ability to design and fabricate. William Paley presented the argument for 'Intelligent Design' in *Natural Theology; or Evidence of the Existence and Attributes of the Deity, collected from the Appearance of Nature* (1802). This work had a profound influence on religious thought during the first half of the nineteenth century.[31] Charles Darwin was one who read and appreciated the book. He completed the Copernican revolution:

> ...by drawing out for biology the ultimate conclusions of the notion of nature as a lawful system of matter in motion. The adaptations and diversity of organisms, the origin of novel and highly organized forms, even the origin of man himself could now be explained by an orderly process of change governed by natural laws. [32]

In 1859 Charles Darwin published *The Origin of Species* followed in 1871 by *The Descent of Man*. The theories these works contained were to have a profound impact upon the concept of human distinctiveness. "A Darwinian account of humanity

can find no place for the notion that the species (acquired suddenly) a property called 'the image and likeness of God'. Human distinctiveness evolved gradually." [33] In his theory of evolution Darwin showed that the directive organization of living beings could be explained as the result of process, natural selection. There was no need to invoke a Creator or any other external agent. The origin and the adaption of organisms were thus brought into the discipline of science.

The theory of natural selection is based formally on four propositions which Darwin believed to be true and three deductions which are now confirmed by modern genetical studies:

1. Organisms produce a far greater number of reproductive cells than will give rise to mature individuals
2. The numbers of individuals in a species remain more or less constant
3. Therefore there must be a high rate of mortality
4. The individuals in a species are not all identical but show *variation* in all characters
5. Therefore some variants will succeed better than others in the *competition* for survival and the parents of the next generation will be selected naturally from among those members of the species that show variation in the direction of more effective adaptation to the conditions of their environment
6. Hereditary resemblance between parent and offspring is a fact
7. Therefore subsequent generations will maintain and improve on the degree of adaptation realized by their parents by gradual change.[34]

The key words in the theory are *selection, variation, competition* or *struggle for existence* and *adaptation.* The central argument was summarized by Darwin in *The Origin of Species:*

> As more individuals are produced than can possibly survive, there must in every case be a struggle for existence, either one individual with another of the same species, or with the individuals of distinct species, or with the physical conditions of life ... Can it then, be thought improbable, seeing that variations useful to man have undoubtedly occurred, that other variations useful in some way to each being in the great and complex battle of life, should sometimes occur in the course of thousands of generations? If such do occur, can we doubt ... that individuals having any advantage, however slight, over others, would have the best chance of surviving and procreating their kind? On the other hand we may feel sure that any variation in the least

> degree injurious would be rigidly destroyed. This preservation of favourable variation and the rejection of injurious variations, I call Natural Selection.[35]

Darwin knew that all members of a species show variation in size, strength, health, fertility, longevity, instincts, habits, mental attributes and countless other characteristics. Variations of this sort have been used in the production of cultivated plants and domestic animals since the Neolithic Age. Now Darwin was extending this process to the wild. He recognized that organisms are adapted to certain ways of life and their parts adapted to particular functions. He introduced a teleological aspect of living organisms into the realm of science. Associated with the discussion on selection was Darwin's causal thinking about speciation:

> Believing that the real changes in evolution come when a lineage splits in two (as obviously happened in the Galapagos), Darwin spoke of his "principle of divergence", which ... comes about when organisms divide up the spoils; selection promotes the splitting and multiplication of types so that resources can be more efficiently exploited. This led Darwin to his famous description of life's history akin to a magnificent tree.[36]

Ernst Haeckel, a German follower of Darwin, offered a diagram of the evolutionary tree of life with man at the apex, the goal and crown of creation.[37] Whether Darwin endorsed this view is doubtful. He asks why "...*Homo sapiens* should be viewed as a goal and a generality when *Pharkidonatus percarinatus* (a favourite fossil snail of mine ...) which lived for a much longer time and with markedly larger populations, ranks only as (an) accident of history?" Why so preferred a status for one species among millions? Human existence, he argues, is a detail in a vast universe not evidently designed for our presence. "*Homo sapiens* ... ranks as a 'thing so small' in a vast universe, a worldly improbable evolutionary event and not the nub of universal purpose." [38] Many disagreed, not least contemporary evolutionary palaeobiologist S. Conway-Morris (see Chapter 4, p. 66).

Charles Darwin recognized the implications of his theory. Writing to A. R. Wallace in 1857 regarding *The Origin of Species* he comments:

> You ask whether I shall discuss "man"; - I think I shall avoid whole subject, as so surrounded with prejudices, though I fully admit that it is the highest and most interesting problem for a naturalist. My work will *not* fix or settle anything: but I hope it will aid by giving a large collection of facts with one definite end.[39]

Darwin knew before *The Origin of Species* even had been published that *Homo sapiens* must be subject to the same process of development and change (evolution) as the rest of creation:

> As soon as I had become, in the years 1837 or 1838, convinced that species were mutable productions, I could not avoid the belief that man must come under the same law.[40]

It was not until 1871 that Darwin published *The Descent of Man* where he presented the argument, first postulated by Lamarck in 1809, that man and the primates shared a common ancestor. He drew upon geological evidence which suggested that "...organization on the whole has advanced throughout the world by slow and interrupted steps." [41] The culmination in Vertebrata is man. He tracks man through the animal kingdom; the first and most ancient progenitors – a group of marine animals, to fish, to amphibia, to reptiles, to mammals, to ancient marsupials, to the Simidiae. Here a split occurred between new and old world forms. It was from the latter at a remote period, that "...Man, the wonder and glory of the Universe, proceeded." [42] Consequently man is endowed with a pedigree of prodigious length but not of noble quality. If any link in the chain had not existed then man would not have been what he is today. Darwin thus rejects the discontinuity between man and the rest of creation:

> ... man and all other vertebrate animals have been constructed on the same general model, ... they pass through the same early stages of development ... and ... they retain certain rudiments in common. Consequently we ought frankly to admit their continuity of descent ....[43]

He continues; only natural prejudice and arrogance insists upon a special status for man and rejects the notion of continuity with animals. He prophesies that in time evolutionary theory will be accepted. No longer will each plant or animal be perceived to be the work of a separate act of creation.

Darwin believed that in the 'struggle for existence' man survived. He *emerged*, with characteristics beyond those possessed by the rest of the animal kingdom:

> The small strength and speed of man, his want of natural weapons ... are more than counterbalanced ... by his intellectual powers, through which he has formed for himself weapons, tools ... and by his social qualities which lead him to give and receive aid from his fellowmen. [44]

For Darwin, intellect and social behaviour (altruism?) were the key to man's emergence and distinctiveness. Natural selection arising from competition between tribes together with inherited effects of habit would have been sufficient to raise man to his present position in the organic scale. Man has risen by slow and interrupted steps from a primitive to the highest standard yet attained in knowledge, morals and religion. Nevertheless Dawin was convinced that the difference in mind between man and the higher animals was one of degree, not of kind:

> We have seen that the senses and intuitions, the various emotions and faculties, such as love, memory, attention, curiosity, imitation, reason, ... of which man boasts, may be found in an incipient, or even sometimes in a well-developed condition, in lower animals.[45]

Darwin asks at what age does an infant possess the power of abstraction or become self-conscious, able to reflect upon its own existence. He claims that the half-art, half-instinct of language bears an evolutionary stamp; so does religious feeling - spirituality. Belief in spiritual agencies follows from other mental powers. He identifies the moral sense as providing the most significant distinction between man and the lower animals.[46] Social instincts together with active intellectual powers and

the effects of habit would lead to altruistic behaviour ('do unto others ... ') which in Darwin's view is the foundation of morality.

A significant point, in the absence of genetic knowledge, was the means by which this sort of social behaviour and intellectual (the rise of culture?) could be passed on. Darwin's general theory of the rise of human intellect appeared to depend on the inheritance of acquired characteristics. Was this possible? Darwin thought so. Developing language would act on the brain to produce more complex ideas/thoughts. Such constant exercize would alter the brain structure leading to hereditary transformation and consequently progressive enlargement of human intellect far beyond what was required for human survival.[47] Is this the emergence of complexity?

There was another strand to Darwin's argument, that of community selection; a concept which relates to the contemporary notion of 'inclusive fitness'. A heritable trait that confers little benefit on the individual but is advantageous to the group as a whole will be preserved and spread along the group. Here is a key to understanding the evolution of human altruism. "Our moral instincts ... would urge us to act for the benefit of others without calculating pleasures and pains for self".[48]

Later, another scientist was to endorse Darwin's definition of human distinctiveness grounded in reflective consciousness and morality. Pierre Teilhard de Chardin commented: "Admittedly the animal knows. But it cannot know that it knows – this is quite certain." [49] Consequently human self-awareness differs greatly from any rudiments of mind that may be present in non-human animals.

1.3 *Post-Darwinian Controversy*

Darwin's evolutionary theory challenges many facets of current Christian doctrine:

> ...the nature of biblical authority, the historicity of the creation narratives, the meaning of Adam's fall from grace and (connected with it) the meaning of Christ's redemptive mission; the nature and scope of God's activity in the world; the persuasive force of the argument from design; what it meant for humankind to be made in the image of God and the ultimate grounds of moral values.[50]

Both scientific and religious factions held to their particular view on each point, generally contradictory. Consequently there was divergence of thought.

This was not Darwin's intention. He was aware of the furore his theories would provoke especially in connection with human origin:

> With respect to the theological view of the question. This is always painful to me. I am bewildered. I had no intention to write atheistically. But I own that I cannot see as others do, and as I should wish to do, evidence of design and beneficence on all sides of us. There seems to me too much misery in the world ... On the other hand, I cannot anyhow be contented to view the wonderful universe, and especially the nature of man, and to conclude that everything is the result of brute force. I am inclined to look at everything as resulting from designed laws, with the details, whether good or bad, left to the working out of what we may call chance. Not that this notion at all satisfies me. I feel most deeply that the whole subject is too profound for human intellect. A dog might well speculate on the mind of Newton.[51]

S. J. Gould describes this *apologia* as the finest comment ever written on the proper relation of science and religion. Darwin uses the term chance as we would use contingency not in the sense of random, accidental, without meaning or incapable of explanation. His words suggest that he was not erasing divine purpose. Pain and suffering, death, famine, rapine and the concealed war of nature were justified. They produced the best effect; the evolution of the higher animals:

> There were even hints of a theodicy, an attempt to rationalise the existence of pain, suffering and the uglier features of creation. Might be something be gained by having the Creator create through intermediate processes? [52]

Is there a suggestion in Darwin's thought of process theology? What is certain is that his emphasis on the continuity between man and ape-ancestors was offensive to many. J. Hedley Brooke comments that cartoonists had a field day:

> Apes in their cages allegedly enquired whether they were their keeper's brother. Monkeys were depicted with their tails about to be shorn: 'Cut it off short', says one, 'I can't afford to await developments before I can take my proper position in Society.' [53]

Darwin came close to saying that those who opposed his theory by snarling and baring their teeth confirmed their canine origins! He betrayed a certain humour in recording an 'anonymous compliment' received Feb. 16th, 1875:

> The learned Darwin states that Moses taught confusion
> For Man, he boldly states, descends from Ape or Monkey –
> I having read his book, am come to this conclusion
> Darwin (at least himself) descends from Ass or Donkey.[54]

Darwin's emphasis on divergent lines of evolution from common ancestors (the branching tree, see p. 10) compounded the problem. It was difficult to believe in a divine plan. He challenged natural theology and the concept of the blind clockmaker and the argument from design (see p. 8 above). "Such analogies pointed to the wisdom and power of God, the refinement of whose creatures transcended anything mere mortals could make." [55] Darwinians with atheistic leanings claimed that man is the product of a process that never had humans in mind. The key word is *process.*

Charles Darwin was not the only naturalist to discuss human origins. In 1864 A. R. Wallace applied the theory of natural selection to human evolution. His idea was that physical differences between man and other animals together with external characteristics of the several human races were produced before the emergence of man's mental faculties. It was by superior intellect and moral feeling that man overcame the physical effects of natural selection at a remote geological

epoch.[56] Like Darwin he identified intellect as the key to human distinctiveness. So did J. W. Dawson, who with Wallace honoured *Homo sapiens* as the pinnacle of organic process, the top of the evolutionary tree:

> .... (H)uman reason must be after the model of the infinite Divine reason, that in scientific inquiry we are studying God's laws and the revelation of Himself in nature.[57]

Dawson claimed that mankind's body and spirit are united to the whole of creation, not by descent but through the mind of God. Spirit was a special endowment which enabled humanity to know the mind of God. Wallace argued that natural selection acting on mental organization would lead still more perfect adaption to the exigencies of nature and the social state. This was a synthesis of idealistic philosophy and Biblical orthodoxy common among opponents of Darwin at that time. They were attempts to reconcile Christian doctrine to the findings of science. (Such are not uncommon today.) They were honest discussions aiming to resolve controversy and effect some consensus of opinion. There were those however who found in Darwinian ambiguities the perfect legitimization for whatever they favoured: "...laissez-faire capitalism ... , liberal reform, anarchism ..., socialism, colonial conquest, war ..., patriarchy (and) also ant-imperialism, peace and feminism." [58] This was to have profound implications for social life. It was an agenda for control.

Darwin and many like-minded scientists thought that natural selection no longer operated in modern society. The ethic of care forbade the culling of the weak in mind and body. There was the prospect of degeneration which worried people of all political persuasions. Darwin observed that whereas amongst savages the weak are soon eliminated, civilized societies do their best to check this selection. However:

> ... (selection) continues to operate in other (ways) .... It works to develop the body, as can be seen in the fact that civilised men are stronger than savages and have equal power of endurance. It favours the intellectually able, even

> amongst the poorest classes .... (It) tends to eliminate the worst dispositions.[59]

The recognition that humans are 'fighting apes' and that human behaviour reflects man's origins was to lead to the rise of militarism. War was perceived as an essential part of the evolutionary process: "Nature keeps her human orchard healthy by pruning; war is her pruning hook." [60] Darwinism became all things to all people. Pacifists found justification: murder and war were rare among animals within their own species. Only man killed his own. Conscription and war were criticized for preventing healthy males from breeding and consigning the young to an early death. Darwinism was used to endorse appropriate feminine roles. In Germany the rise of eugenics was perceived as crucial to collective survival:

> German eugenicists had earlier focussed on positive eugenics – efforts to encourage breeding by the more desirable types. But as the economic crisis in the aftermath (of World War I) deepened, the cost of caring for the disabled in hospitals and asylums became an obsession, and the racist element in eugenics came to the fore.[61]

The consequences were devastating.

Charles Darwin's theories and writings, social and scientific comments reflect assumptions conventional in his position. Although the Roman Catholic Church remained for many years in opposition, there was a consensus of opinion among contemporary writers (see Wallace and Dawson, pp. 15-16. above). There was however a tension in his theories between the factors of evolution. Natural selection was important but not the exclusive means of modification. The inheritance of acquired characters was also significant. (This led to a polarization of thought between neo-Lamarckians who minimized the role of natural selection and neo-Darwinians who maximized that role and added to it more recent knowledge of genetics.) Darwin commented:

> ... as my conclusions have lately been misrepresented, and it has been stated that I attribute the modification of the species exclusively to natural selection ... I placed in a most conspicuous position ...the following words: "I am convinced that natural selection has been the main but not the exclusive means of modification." [62]

J. R. Moore claims that this paragraph above all else set the stage for the discussion of evolutionary theory in the closing decades of the nineteenth century.

Summary

To be created in God's image (Gen. 1. 27) is to possess particular traits, rationality, reflective thought, consciousness, moral agency and the capacity for love and relationality. *Imago Dei* is used in reference to humankind only suggesting a radical discontinuity between humans and other creatures. "The claim to a unique status is reinforced by subsequent verses in which humanity is given dominion over the rest of creation .... The biblical view is ultimately theocentric rather than anthropocentric." [63]

Charles Darwin's theory of evolution challenged this view. The pervasiveness of Paleyism helped to account for the clerical outcry and initial hostility of many scientists which greeted the publication of *The Origin of Species* and *The Descent of Man.* Darwinian theory suggested continuity between man and the higher animals. Nature was not the result of specific creative acts but of process. It was the evolution of culture, language, intellect, morals and increasing complexity leading to self-consciousness, which made man distinctive. It was a difference of degree rather than kind. How could scientific advancement of this sort be reconciled to Christian belief? A new understanding of the nature both of God and humanity was required:

> The astonishing thing about the universe is not that it can burst into life, but that this life can become the conscious of God and respond in love and adoration. Thus the orderly universe, the reflection of one aspect of God's

> nature, contains germs of companionship for God himself, realized ... in the emergence of man. [64]

It is perhaps Pierre Teilhard de Chardin who remains the most ardent advocate of evolution as the working-out of God's purposes in the world. It is his view of human distinctiveness which will be examined in the next two chapters.

CHAPTER 2

PIERRE TEILHARD DE CHARDIN AND THE EVOLUTION OF HUMAN BEINGS

2.1 *Biographical Notes and Formative Influences*

Pierre Teilhard de Chardin (1881-1955) in the course of his life and many writings has postulated an evolutionary world-view of immense and far-reaching implication and relevance for the future of humanity. The facts of his life are well documented. C. E. Raven presents an attractive portrait of the family.

Teilhard de Chardin was born on the first of May 1881 at Sarcenat near Clermont-Ferrand, Auvergne. He was the fourth of eleven children and on his mother's side sixth direct descendant of Voltaire's sister. His father Emmanuel Teilhard de Chardin was a gentleman-farmer, "...skilled in agriculture, learned in local lore and antiquities, interested in books and natural history, a collector of birds, insects and geological specimens, quiet, kindly and well-respected; his mother loveable, cultured and deeply religious":

> He inherited from them both a tradition of happy family life and a deep delight in the hill country and volcanic cones of the district, in the simplicity and independence of its life, the rigours of its winters and the hard exercise which fitted him for the explorations and adventures of his later years.[1]

L. Kaufmann comments that the volcanic hills of the Auvergne which Teilhard de Chardin used to roam with his father stimulated his fascination with rocks, stones and fossils. Such activities undoubtedly fostered his later qualifications and achievements both as a geologist and palaeontologist, "...which he pursued in tandem with his studies in theology and spirituality":

> It was perhaps this combination that has made him so vital a prophet for our time, as he struggled to reconcile the language of science and the language of faith.[2]

Teilhard acknowledges the formative influences both of the region where he spent his youth and of the family love in which was he enfolded:

> Auvergne moulded me ... Auvergne served me both as a museum of natural history and as a wild life preserve. Sarcenat in Auvergne gave me my first taste of the joys of discovery ... to Auvergne I owe my delight in nature. Auvergne it was that gave me my most precious possessions: a collection of pebbles and rocks, still to be found there, where I lived.[3]

For his geological interests Teilhard gives the credit wholeheartedly to his father. To his mother he attributes the nature of his spirituality:

> To rouse the fire into a blaze, a spark had to fall upon me; and the spark by which my own universe was to succeed in centring itself on its own fullness came through my mother to light up and fire my child's soul.[4]

From 1892 Teilhard was educated at the Jesuit College of Mongré, Villefranche. In 1899 he entered the Order of the Society of Jesus, spending his novitiate at Aix. In the earlier years of the twentieth century anti-clericalism on the part of the French government was rife. As a result Teilhard was moved, with others, to the Jesuit school on Jersey. Raven comments that it is difficult to discern his particular outlook at this stage or how his wide-ranging insight and interests were encouraged:

> He had brains and charm, a quick tongue and a sense of humour, got on well with his work and with his companions, passed his tests with distinction but had plenty of power in reserve, *and was always devoted to the rocks and to God.*[5]

Teilhard spent three years in Jersey studying philosophy and a further three years as lecturer in physics and chemistry at the Jesuit College, Cairo. His final four years of training (in theology) were spent at Ore Place - the Jesuit Centre, Hastings, Sussex. "It was then that the main lines of his scientific and his religious work and character were settled." [6]

The dominant themes of Teilhard's later work are discernable, at least in embryonic form, in his early writings. Letters and essays produced during his war

service as a corporal stretcher-bearer exhibit how profoundly he was moved by the human suffering and misery of the World War I trenches.

In the post-war years there was concern amongst Teilhard's Jesuit superiors. His scientific work was assumed to be harmless but the novelty of his theological and philosophical thought gave cause for anxiety. Consequently Teilhard spent much of his life in virtual exile in remote parts of the world where he might cause the least theological disturbance. He was prevented from publishing his writings and from holding "...the high academic posts he merited. Thus he was deprived of much of the critical and responsive intellectual environment which is an important stimulus and corrective for most creative thinkers." [8]

He was apparently unaware of the Darwin controversies and of the subject of evolution until he was almost thirty years of age. Raven comments that whilst he must have been concerned with the descent of man both in its scientific and religious significance yet he upheld the traditional understanding of creation until his time at Ore. This is probably because there was then little contact between the English and French schools of philosophy. Whilst in England the controversies were centred on Darwin and religion, in France they concerned issues of Roman Catholic dogma – critiques of scripture and of the creeds.[9]

A critical point in the development of Teilhard de Chardin's thought came with his reading of Henri Bergson's *L'Évolution Creatrice (Creative Evolution).* "Teilhard recognized the 'coincidence of his own inner conviction with the need to understand the data of science, which only evolution could make intelligible. This two-fold awareness blended into a single certitude.' " [10] Teilhard describes his reaction to this revelation:

> I can remember very clearly the avidity with which ... I read Bergson's *Creative Evolution* .... By the direct leap I had taken from the old static

> dualism, which I found paralyzing, to emerge into Universe which was in a state not merely of evolution but of *directed evolution* (that is, of *Genesis*) I was obliged to make a complete turn-about in my fundamental pursuit of Consistence.[11]

The theory of evolution was unfamiliar to the French. For them Darwin and Lamarck represented the nineteenth century theory of *transformisme,* a term used to cover problems in natural development which could not easily be explained. For example, the transformation of one species into another over a long period of time might remove the problem of explaining extinctions as revealed by fossil evidence:

> Geology came to be a historical science in the middle of the (nineteenth) century, because the earth was then discovered to be in the process of becoming, of growth. In the various strata have been found the fossils, the petrified remains of earlier living creatures. Thus many a geologist has turned to palaeontology because he was drawn to the study of these fossils .... (A)s the strata are in chronological order of succession, so too are the once-living creatures preserved in them as fossils. In this way geology leads on to the problems of biological evolution. This was the road trodden by Teilhard. [12]

He was first a geologist.

It was the unity and continuity of the natural world as interpreted by Bergson which resonated with Teilhard de Chardin. Moreover he recognized that evolution progressed in leaps. He was therefore able to perceive the emergent *new* which Bergson stressed in his treatise:[13]

> Life too must bud and divide; otherwise the very existence of phyla would be inconceivable .... When we consider the phenomenon of continuous birth in one direction (orthogenesis), we are compelled to pay increasing attention ... to sudden changes of forms or ...*mutations.* [14]

Teilhard began to argue that the theory of evolution was no longer a simple hypothesis. "It is the general method of research, accepted in practice by all scholars .... It is merely the extension to zoology and botany of a form of science which is continually extending its rule over all human sciences ...." [15] C. Cuénot comments that Teilhard's emergent thesis differed radically from Bergson's. The unity of the world which he was beginning to interpret was not immobile but of a dynamic,

evolutive character – a cosmogenesis, unfolding in biological space-time. The Bergsonian cosmos was essentially in the form of a *divergent* irradiation, originating at a central source. Teilhard's view was distinctly *convergent*. He rejected the Bergsonian idea of a vital impulse having no finality:

> Teilhard, although a vitalist – or, more exactly, a supporter of orthogenesis – did allow mechanisms their part ... but credited them only with a minor role in complex forms of life – man above all – and maintained that life is, at bottom, of psychic character.[16]

One might query whether Cuénot's interpretation is strictly true. Undoubtedly Pierre Teilhard de Chardin held in high esteem man's spiritual nature, but that in turn was supported by biological structure. One might also ask upon what evidence Teilhard grounded the notion of convergence. These questions will be addressed later. It is clear that Teilhard, like Darwin, embraced the notion of *continuity* in nature. He too was beginning to envisage the progress of life as a tree which buds and divides (see note [14], p. 23 above).

Raven raises a point on which Teilhard's work might be open to criticism: that his contact with scientists was limited to geologists and (presumably) palaeontologists. He claims that Teilhard had little contact with evolutionary biology as such. He ought to have been familiar with:

> ...the widespread interest in genetics and the controversies then so violently waged between orthodox Darwinians with their insistence upon small variations sifted, fixed and developed by natural selection, and the Mendelians with their study of the physiology of heredity and of the fact and importance of mutations.[17]

This criticism does not appear to be wholly justified:

1. Teilhard knew of and accepted the notion of mutation (see note [14] above)
2. He developed an excellent relationship with (amongst others) the biologist Julian Huxley.

Could it be that Teilhard's concern was not so much with the *mechanics* of evolution and the appearance of man as with *direction*, the movement of human evolving and where it was taking humanity?

2.2 '*The Appearance of Man*'

Having accepted with enthusiasm the notion of evolution Pierre Teilhard de Chardin began to apply the process, as he conceived it, to the origin and development of human beings. In *Christianity and Evolution* he argues that theologians must understand and accept "...the new ideas of himself which modern man has been scientifically obliged to develop." [18] The 'new idea' is one of organic and genetic dependence which links humanity intimately with the rest of nature – a form of continuity. "Man is born and grows, historically, in dependence on the whole of matter and the whole of life." This biological interpretation of the place of the human species relates to Darwin's own view (see pp. 11-12). Teilhard concludes categorically that man too is part the evolutionary process:

> ... man's origin by way of evolution is now an indubitable fact for science.[19]

Teilhard de Chardin was a true scientist. He has been criticized for a less than scientific approach (see p. 24 above, pp. 32-33 and Chapter 4, pp. 64-66). This is not so. In *Vision of the Past* Teilhard demonstrates his scientific method and identifies four empirical properties of humanity, properties which may be observed and measured:

1. The biological structure of the body
2. Human invasion – the geographical and demographical spread of human beings
3. Tool-making

4. The organic unity of humanity.[20]

He argues that considering the importance man has assumed in the terrestrial layer of life (*the biosphere* – the living layer), somatically he differs "...astonishingly little from the animal forms amidst which he emerges: he is very much a primate, and, as such preserves with exceptional lustre the zoological characteristics of the most ancient known mammals." [21] It is significant that (in this translation) Teilhard uses the word *'amidst'* and not *'from'.* R Speaight states that Teilhard insisted upon a clean break between the line of hominids and that of the larger apes. "Humanity appeared at the end of a process leading towards a shorter face and larger brain; '...already very old, fully developed, and almost at its extreme zoological expansion.' " [22] Teilhard could not identify a link between man and the other primates, although the discovery of Piltdown Man in 1912 may have caused him to wonder. Piltdown Man was in fact an elaborate hoax, well documented. Teilhard "...like nearly everyone else still believed in (his) authenticity ... although he was not able to explain him.":

> Piltdown Man, like the other groups of primates, stood in no known succession; but Teilhard believed that he 'admirably resumes life's previous effort.' [23]

Although a direct link could not be established Teilhard developed his own notion of continuity in man's origins. He compared the primates to the branches of a conifer, "...all the elements of which are uniformly covered with overlapping leaves or scales":

> To follow the design of a stem so constructed, it is impossible to trace a continuous line: to go forward, one must momentarily follow, then abandon each scale, one after the other – one must jump from leaf to leaf – so that the path followed, whilst still keeping to the direction of the branch, is broken into a number of divergent sections. An obvious continuity, but hidden beneath a cloak of discontinuities ....[24]

Regarding the zoological position of man Teilhard claimed that careful study of the bone structure revealed little to distinguish humans from the anthropoids:

> Flattening of the face, increase of the cerebral part of the skull, two-footed stance coinciding with a general recasting of the body's balance but leading to no profound transformation of the bones taken singly, this is all that osteology finds to report. [25]

Upon this basis Teilhard states that man does not deserve to form geologically more than a family or sub-order: the hominids or hominians. He argues that to appreciate the greatness of the human geological fact one must continue to observe empirically. He states that the slight morphological differences (disproportionate with human biological influence) if taken in association with other properties will produce the distinguishing index of the "...transcendence of the human phenomenon of man". [26]

Humanity's second property was that of colonization – man's truly unique power of extending and invading to form successful geographic distribution. Teilhard believed that hominids as we know them derived from Africa. He calls Africa the beginning of a true wave of hominization, "...which progressively shed its centrifugal sheets from age to age, until towards the end of the Quaternary it covered the entire face of the earth." [27] It was from these earliest hominids in Africa that the present vigorous and world-wide form of humanity derived.

Two further properties, new in the history of life, appear with man: "...the discovery by individuals of the artificial tool and the realization by the collectivity of an organically linked unity." By the latter phrase Teilhard may be understood to mean a distinctive and remarkable "...envelope woven by humanity on the terrestrial globe; a network informed by a common vitality." [28] Teilhard attributes these properties to the rise of intellect: increasing brain complexity leading to self-consciousness, self-awareness. Darwin too had recognized brain complexity and the rise of intellect as leading to hominid emergence (see p. 13 above). However despite

the fact of emergence and a relative distinctiveness among hominids Darwin relegated the group as a whole to a mere side shoot on the tree of life – "... a thing so small ..." (see p. 10 above).

Teilhard's argument was now tending toward the philosophical, the metaphysical, the *theological.* He ascribed man's capacity for emergence to two psychic factors:

1. reflexion – "the faculty possessed of every human consciousness of turning in on itself in order to recognize the conditions and mechanisms of its activity"
2. conspiration (a phrase deployed by Edouard Le Roy) – "the aptitude of different consciousnesses taken in a group, to unite (by language and other more obscure links) so as to constitute a single ALL, in which, by way of reflexion, each element is conscious of its aggregation to all the rest" [29]

Darwin recognized the role played by communication, language and culture in the rise of hominids (see p. 13), but Teilhard took that role still further. Evolution in his view is progress, not in the sense necessarily of becoming better, but perhaps more in that of increasing complexity. The key to this is cephalization:

> Teilhard's law of the parallelism between material structure and life-consciousness (law of complexity – consciousness) is exhibited within the higher reaches of life in the parallelism of brain-nerve apparatus and consciousness. The greater the complexity of brain-nerve apparatus the higher the form of consciousness. This process has attained its (provisional) summit in *Homo sapiens* .... [30]

Humanity in its increasing complexity has become self-conscious, self-aware; man knows that he knows: *'L'animal soit, l'homme soit qu'il sait'.* (B. Delfgaauw (1969) citing Teilhard in *Evolution...*, 43, p. 101. below) Consequently the human has freedom of choice, both practical freedom and interior freedom (that of self-realization). It is in this aspect that Teilhard perceives the human not as a mere side shoot on the tree of life but as the very axis and spearhead of evolution *(axe et flèche de l'evolution)* : [31]

> The human is not the static center of the world, as we thought for so long; but the axis and the arrow of evolution – which is much more beautiful. [32]

Like Darwin Teilhard recognized the importance of the biological group, the species (see p. 13, community selection). The human being is born not only as an individual but also as a species. He evolves as a species. Therefore he should be observed as a species. For Teilhard the biological process taking place now within humanity is the progressive development of a collective group consciousness. The phenomenon of life can be reduced biochemically to ultra-complex, ultra-organized molecular groupings. "Similarly the universe is moving toward the super-complex, the super-centred, the super-conscious":

> From this point of view ...
>
> synthesized. [33]

Teilhard is suggesting a dynamic movement; one which is directional, with humanity pointing out that direction and one which is convergent where humanity becomes, in his word, *totalized.*

2.3 *'The Human Phenomenon': A New Concept?*

Pierre Teilhard de Chardin, using Darwin's theory of evolution as a framework, had traced successfully not the *descent* but the *ascent* of man:

> ... from the anthropomorphic apes to the first makers of tools, from *(H)omo sapiens* – black, white or yellow – to Neolithic man who had taken possession of the earth, and so to our present stage of unification and industrialization .... [34]

Teilhard recognized that whilst the nineteenth and early twentieth centuries were concerned primarily to throw light on man's *past*, "...the result of their inquiries

(was) to make it unmistakably clear that the appearance of thought on earth corresponded biologically to a 'hominization' of life":

> We are now finding that the concentration of scientific researches, focussed *ahead* on the extensions of the 'phenomenon of man', is opening up an even more astonishing prospect in that direction: that of a *progressive 'humanization of mankind.'* [35]

More than ever in his opinion *hominization* – a process of becoming more truly human (human perhaps as God intended humanity to be) through the development of intellect - is the distinguishing index which places humanity above the animal sphere. Humanity is a phenomenon, to be studied empirically as any other. However the human phenomenon for Teilhard was not simply the study of the biological species as it was for Darwin. The human phenomenon took account not only of biology, but also of human demographics, influence, history, values and much more. The totality of humankind is one to be described and analyzed as any phenomenon for scientific study. [36]

Teilhard began to expand the theory of evolution in order to account for the facts as he perceived them. His theory was holistic and dynamic, embracing not simply the evolution of humanity but also of the cosmos and humanity's place within it. His ideas were so radically novel that a new terminology was employed by him to define features of the phenomenon. He describes four stages in the process of evolution:

1. Cosmogenesis – the evolution of the cosmos or universe
2. Biogenesis – the evolution of biological life
3. Noogenesis – the evolution of thought
4. Christogenesis – the evolutionary stage in which humanity transcends the physical world and merges with an Omega Point. [37]

The basic propositions argued by Teilhard are as follows:

1. The cosmos (in) all its aspects including man, is to be understood only as a continuous process of evolution in which each phase has a distinctive period.

2. Matter is in principle conscious matter; but it requires a high degree of organization (*complexity*) to enable it to cross the threshold beyond which it can manifest itself as consciousness.
3. In matter a duel energy is operative: a tangential energy informing and controlling matter in its normal physico-chemical reactions – and a radial energy by which matter is constituted as progressively higher forms of unity.
4. There is a parallelism, a direct proportional relationship between complexity and interiority (*consciousness*).[38]
(*The more complex the brain the more self-aware, conscious, the entity: author's comment.*)

Enshrined in these propositions is Teilhard's law of complexity–consciousness and a reference to the energies by which it operates. Growth in complexity is growth in interaction and interdependence: "...a coming into relationship of things which had been more or less independent of each other; a formation of some new unity in which separate entities relate and become part of something greater than themselves." [39] This coming together is perhaps what Teilhard refers to as 'aggregation'. Certainly the emphasis is relational. The development of complexity at its lowest level is one based on chance. With progression, the upward thrust of evolution becomes more marked as it rises, and more directional:

> At the same time, the rising awareness, from that of inanimate matter, through that of lower forms of life, through the forms of consciousness we can begin to appreciate in the higher animals, to that reflective self-awareness found in man – is mirrored by an increase in ability to respond to the environment, that is, in *responsibility* in the fullest sense of the term. [40]

Whilst the evolution of the cosmos indicates that there must have been a beginning, Teilhard takes this *alpha* and extrapolates from it to the conclusion of an *omega* (see note [37] above).

The role of chance in evolution is one which has been much debated. Darwin would argue that in natural selection it plays a key role. C. E. Raven comments that much of our talk about randomness is a confession of our ignorance.[41] What part could chance possibly play in Teilhard's convergent,

directional, progressive thesis? Teilhard acknowledges wryly that humanity is "...supported by a giddy scaffolding of improbabilities to which each new progress adds a new platform".[42] Nevertheless in a letter to Julian Huxley, 27 February 1953, he argues convincingly that the operation of natural selection might well be 'loaded' and consequently directional:

> Is it by chance ... that the *Weltstoff* (*that is, world stuff/matter/fabric: author's comment*) presents itself to us, scientifically, as endowed with a special sort of "gravity" that makes it take advantage of every chance always to fall (or rather rise) through greater complexity to greater consciousness? – in other words, if the *Weltstoff* were not originally *"loaded"* with a certain bias, do you believe it would offer any purchase to natural selection? [43]

Teilhard claims that hominization has unleashed an immense force on the world. Until the emergence of man, life – animal groups – developed unconsciously by means of the instinct to reproduce. "Physical evil spurred them on, for there exists an initial disunity deeply rooted in matter, which is the source of pain and death." Animals raised themselves as a group by means of the urge to survive – the struggle for existence and the survival of the fittest. "(Man) ... distinguishes two iron laws to which the animals bow incomprehendingly ... the necessity of denying themselves in order to grow and the necessity of death, and feels (the more deeply the more truly he is man) this burden and horror". [44] What raises humanity still more is the conscious unity of souls, the Noosphere – the thinking self-reflective web enfolding all humanity.

Teilhard de Chardin was consistently an humble, self-critical man. He was always a scientist:

> ... hypothesis is the aim, the soul, and true content of scientific theory; it is like life, changeable, fragile but progressive. Good hypotheses are continually modified but in a definite direction, which they perfect themselves by following; and at the end of this evolution they attain the rank of fixed elements, designed to figure thereafter in any representation of the world.[45]

He began to share his hypothesis. In a lecture delivered in Peking 1942 he commented:

> The views that I present are still ... only at their birth. Do not therefore take them as universally accepted or definitive. What I am putting before you are suggestions rather than affirmations. My principal objective is not to convert you to ideas which are still fluid, but to open horizons for you, to make you think.[46]

In a similar vein he wondered what reception might be given to any published work:

> ... I've written ... a dozen pages on 'The Phenomenon of Man'; I've just sent them off to Louvain for 'revision'. I'd like to see them appearing in the review *Scientia.* But I've no precise idea what sort of reaction reading them will have on people unfamiliar with the ideas I'm putting forward; I'm wondering if it won't all seem rather mad.[47]

To his brother Joseph he wrote from New York, 7 April 1953:

> My work has gone on in spite of everything. I am contemplating a short book (publishable??) on the future of the human species, to correct or complement certain notions recently brought out by my friend Julian Huxley and by Charles Darwin (grandson of the great man). But I hardly know when I shall get down to writing it.[48]

Teilhard's relationship with Julian Huxley was profoundly and mutually satisfying and fulfilling. It was a valued friendship, a resonance of minds. Both men had formulated a similar line of thought, though proceeding from different traditions. Teilhard perceived this in his scrutiny of Huxley's collection of essays *The Uniqueness of Man,* although God did not feature in the argument. Huxley's tribute to Teilhard in *Encounter April 1956* and in the introduction to the 1959 edition of *The Phenomenon of Man* demonstrated how scientific appraisal of phenomena could bring together a mystic and a rationalist:

> From the moment of my first meeting with Père Teilhard in 1946 ... I realized that I had found not only a friend, but a partner in the intellectual and spiritual adventure. Though he had approached the problem of human destiny from the standpoint of a Christian and a Jesuit Father, and I from that of an agnostic and a zoologist, we had been thinking along the same lines and had come to astonishingly similar conclusions. [49]

Huxley explains that this was because both had chosen to observe humanity as a phenomenon rather than as a metaphysical, ethical or theological problem. Humankind was part of the whole of creation and related to it. Within the human form body, mind and spirit were part of the whole. Both offer a holistic view of psychosomatic unity prevalent today rather than the dualism of body and mind which Teilhard rejected (see note [11], p. 23 above).

Differences lay in their approach to the study of the human phenomenon. C. Cuénot argues that Teilhard tended to stress the importance of applying scientific method to history and sociology – value-laden disciplines more generally assessed qualitatively. He sought to reconcile subjectivity and objectively. According to Teilhard the final goal of evolution was not simply the production of more fully developed personalities. "That the purpose of society was to develop personality, in the individualistic sense of the word, was in his eyes a complete mistake." [50]

In a letter to Huxley, Teilhard describes most clearly the relationship and the divergence of thought developing between himself, Huxley and C. Galton Darwin:

> All three of us are impressed by the revolutionary gathering in on itself of mankind, and by the development, within this totalized whole, of a ramified network of cultures and "creeds", which oddly reproduces, in the context of thought, the various "patterns" of zoological phylogenesis. Where we still differ (you, G. Darwin and I) is when we come to estimate the biological importance of socialization. For you (and for Darwin) there is, in the phenomenon of human totalization, no more than a sort of cumulative process that leads ultimately to equilibrium .... Could we not ... go a step further, and recognize (scientifically) that the "pool" ... is not simply confluence but also convergence (an irresistible and irreversible convergence) of thought upon itself? Such a convergence (provided that there is no lack en route of either physical energy or psychological "drive") would define a critical point of speciation in the future .... [51]

The outcome of the discussions between the three scientists is examined in Chapter 4, pp. 72-73.

Teilhard de Chardin was beginning to realize possible implications emanating from his theory. His 'critical point' was one:

> ... within this human era *we are actually passing through a singular critical epoch ....* (We) are standing at the present moment, not only at a change of century and civilization, but also at a *change of epoch.* [52]

Teilhard believed that although classed zoologically as a primate "...man has inaugurated a new sphere on earth the sphere of rational discovery, of artificial constructions and of an organized totality." [53] If there is no purpose or goal, no consummation of life's progress, then in Teilhard's view the world is "...absurd, self-destroying, condemned by the first reflective glance which it has attained at the cost of immense efforts ...." He believed passionately that there was something or *someone* more, into which eventually all life's elements will be subsumed:

> (T)he interior equilibrium of ... the Noosphere requires the presence *perceived by individuals* of a higher pole or centre that directs, sustains and assembles the whole sheaf of our efforts.[54]

Teilhard de Chardin had reached a critical point in the development of his theory: the emergence of God.

Summary

Pierre Teilhard de Chardin, geologist-palaeontologist, scientist and Jesuit priest formulated in the early years of the twentieth century a radical new concept of evolution grounded in Darwinism. He developed a dynamic holistic theory. For him evolution was not simply a biological idea but a basic tendency underpinning all substance from the simplest sub-atomic particle to the most complex, conscious organism – man:

> With the coming of what Teilhard calls the noosphere, man's self-consciousness, intellectual cognition, communication and control, begins to dominate and supersede physical developments; nurture tends to replace

nature; the result is a vast extension of life's capacities and the opening up of unpredictable possibilities. [55]

Both Teilhard and Darwin acknowledged intellect and self-conscious thought as the key to the emergence of the human species as a group. They recognized the significance of process and chance. Teilhard however in contrast to Darwin perceived evolution to be teleological, relational, progressive and convergent with the human species as the 'axis and arrow'. Darwin struggling perhaps with personal despair could recognize humanity only as a side shoot of the tree of life and evolution as not especially progressive, divergent and non-teleological.

Teilhard most significantly placed God centrally within his thesis: for him God is the Alpha and the Omega.

CHAPTER 3

PIERRE TEILHARD DE CHARDIN, HUMANITY AND THE QUESTION OF GOD

(Christ) is the image of the invisible God, the first-born of all creation; all things were created through him and for him. He is before all things, and in him all things hold together. Col. 1. 15, 16b, 17.

3.1 *'No Acceptable Place for Adam'*

For many the disciplines of science and faith are mutually exclusive with little or nothing in common. This may have been so for Teilhard as he struggled to disentangle science from traditional theological doctrine. Subconsciously he was working towards unity:

> His mind hankered after unity. He was impelled by an "insatiable need for cosmic organicity". This urge to unity, cohesion, synthesis is one of the most characteristic properties of his mind. It is the "totality" that he wishes to encompass not just a constituent part or aspect of it. [1]

The evolutionary process (for which the evidence in Teilhard's view was overwhelming) has culminated in man. T. Corbishley comments that for Teilhard man is the meaning of evolution, not as regards the process itself, but rather as process-producing man (see pp. 47-48):

> If we are to understand what he is, we can only do so by looking back over the millennia which have succeeded one another, slowly, painfully, yet always moving along an axis that somehow controls and directs the whole fermentation which, from the primeval cosmic stuff (*Teilhard's 'weltstoff': author's comment*), through the emergence of life and consciousness, has resulted in this intelligent being, *Homo sapiens.* [2]

Two questions arise:

1. How does the image of an evolved human relate to the portrait of creation depicted in Genesis 1?
2. What is the 'axis' which somehow controls and directs the process of evolution?

In Teilhard's words: Who will give evolution its God? (See p. 41, note[13].)

In *The Appearance of Man* Teilhard discusses Freud's argument which postulates that with the advance of science man has lost progressively all the privileges which appeared to make him distinctive and superior to the rest of creation:

> *Astronomically,* first of all when (like and with the earth) he was engulfed in the enormous anonymity of stellar bodies; then *biologically,* when like every other animal he vanished in the crowd of his fellow-species; *psychologically,* last of all when an abyss of unconsciousness opened in the centre of his *I*; by three successive steps in four centuries man ... has seemed definitely to redissolve in the common ground of things.[3]

Teilhard did not accept so depressing a view. For him there is a paradox. Man is in the process of re-emerging and more than ever at the leading edge of the evolutionary process. This is because since by his very melting back into the crucible, "...into the general current of convergent cosmogenesis, he is acquiring in our eyes the possibility and power of forming in the heart of space and time, *a single point of universalization,* for the very stuff of the world." [4] The perception of a convergent spirituality arising from a transformed intellect is Teilhard's *critical point* (see p. 35). This is the significance of the evolved human being.

For Teilhard humanity has taken a somatic (biological) leap towards greater intellect, a higher state of consciousness. Such a leap has psychic implications:

> The great leap – the leap *par excellence* ... - occurred with the coming into existence of the first man; and it is reiterated in the embryonic development of every man. God as Creator is in the last analysis He who makes this jump possible. [5]

Teilhard argues that science points to a Creator as the alpha and origin of all things. There must have been a beginning and for Teilhard it is equated with God. It is at the critical point "...in the science of evolution (so that evolution may show itself capable of functioning in a hominized milieu), that the problem of God comes in –

the Prime Mover, Gatherer and Consolidator, ahead of us, of evolution." [6] There is a significant word in Teilhard's statement: *ahead.* He perceives God not only as the beginning but also as the end.

Where is the beginning for humanity? Science claims that *Homo sapiens* is descended from animals. Theology claims he has been created directly by God. Theology (in the traditional Roman Catholic view of Teilhard's era) derives its account of creation chiefly from Genesis 1-3. Assuredly the author(s) of this passage were correct in their presentation of cosmic and biological order, and without the benefit of current knowledge. Man – Adam – was created by God from the dust of the earth. He was given dominion over the rest of creation (Gen. 1. 27-28). He was to be a responsible steward. He was also, together with his wife, responsible for that first act of turning from God; wishing to be autonomous – to be as God himself (Gen. 3. 4). Teilhard struggling to reconcile two conflicting views can find no acceptable place for the Adam of Genesis:

> Zoologists
>
> ---
>
> ---
>
> our race. [7]

Teilhard explains that the Adam of the theologians must have been a hominid. If he was to assume total responsibility for original sin then he must have been born adult. This is not possible. Teilhard recognized that such an origin is against the laws of nature. Science is unable to magnify the palaeontological past sufficiently to discern and identify individuals – only populations. Consequently monogenism and polygenism (that is, one or a number of original human couples) are in reality

theological constructs only, introduced for dogmatic reasons. Such constructs are experimentally unverifiable and therefore extra-scientific by nature.[8] Teilhard continues that in science one would refer rather to monophyletism or polyphyletism (that is, one or a number of *branches* or phyla at the foundation of humanity):

> ... when a scientist ... recognizes the unity of the human species, he has no intention ... of affirming the existence of a single original couple: all he is saying is that man represents zoologically a single *stem* - ....[9]

For Teilhard the notion of a single Adam is an hypothesis. Human distinctiveness does not lie in the doubtful claim of specific and direct creation in the image of God, nor in the doctrine of original sin. He believed that somehow theologians will come to realize that in this organically structured universe a solidarity of man, "...much closer even than that which they seek in 'the bosom of Mother Eve,' is ... provided for them by the extraordinary internal cohesion of a world which ... is in a state of cosmo-and anthropo-genesis." [10] Teilhard is expressing his own particular view, his own interpretation of 'Adam', grounded in traditional Roman Catholic doctrine. The Hebrew text in fact translates not to a single human individual but to humanity collectively. This is recognized today.

Human distinctiveness lies perhaps in relatedness. C. E. Raven writes that it was his concern for human relationships which impelled Teilhard to emphasize hominization. He had a genius for friendship. In his pastoral work with men and women, in his teamwork both in the laboratory and in seminars, in travel and exploration, in endurance of hardships, in conferences and discussions he displayed an unfailing "...gaiety and wit, insight and sensibility, speed of mind and mastery of speech..." characteristic of a man for others – a good colleague and an outstanding contributor.[11] Teilhard epitomized that for which he sought – a human 'for others'. He truly practised that which he believed.

In his effort to synthesize his scientific with his Christian convictions Teilhard argues for the reality of a phenomenon "...whose manifest existence has been haunting me for what will soon be half a century. I mean the rise (irresistible and yet still unrecognized) over our horizon of what one might call a God (*the* God) of evolution." [12] Teilhard explains that Aristotelian models of God as an outside Prime Mover who acts *a retro* (from the beginning), are insufficient. It is impossible to conceive or to worship anything but an organic Prime Mover, *ab ante* (drawing us ahead). He goes on:

> In future only a God who is functionally and totally 'Omega' can satisfy us, Where, then shall we find such a God? And who at last will give evolution *its own* God? [13]

For Teilhard, Christ is that God: the ultimate man for others, the human as God intends humans to be.

3.2 *Teilhard and Christ – the Evolver*

It became apparent that the tension within Teilhard which impelled him to seek unity was no longer a simple question of a synthesis between science and religion. Rather this tension was between a cosmic sense and a Christic sense:

> By cosmic sense or cosmic awareness he means the "more or less cosmic affinity that binds us *psychologically* with the all which encircles us. Christic sense or Christ-consciousness means for him the conviction on the part of Christians that Christ constitutes the centre and final goal of all things.[14]

For Teilhard the issue was resolved to produce cohesion and fundamental unity. He describes the struggle in the depths of his soul between the 'God of the Above' and the new-perceived 'God of the Ahead'. After time and much hard work he came to see that the two converged upon each other and were in fact the same:

> ... a wonderful confluence: no longer in a vague way between Christ and Matter, but between a Christ who was distinctly seen as an "evolver" and a cosmic Centre which was positively attributed to Evolution.[15]

Christ had become for Teilhard both the evolutive agent and the recognized cosmic centre of evolution: "Thus I had reached the Heart of the universalized Christ coinciding with the heart of amorized Matter." [16]

Teilhard was developing a new Christology. He asks what form such a Christology should take if it is to remain itself in a new world? [17] It ought surely to be one which meets the requirements of an evolutive world based on "...a collection of random chances, not inspired by a belief in the intentional activity of the finger of God." [18] For Teilhard the new evolutionary world needed a Christ who could be accepted, believed and worshipped – one who should be presented as the saviour and redeemer both of the concept and of the reality of evolution:

> According to Teilhard, Christ is the energy behind cosmic history; he is both the source and goal of human existence .... All of existence is held together by Christ and culminates in him. The whole of cosmic history point towards its fulfilment in the unification of all humanity (and the cosmos) into the eschatological community of which Christ is the head.[19]

In *Christianity and Evolution* Teilhard postulates 'Christ the Evolver' – the cosmic Christ of his thesis. He appeals for a wider view. Traditionally Christians are taught to think, act, fear and worship on the scale of their own individual life and death:

> How can one expect (the Christian), without breaking through the framework of tradition, to expand his faith, his hope, his charity to the measure of a terrestrial organization which is destined to continue throughout millions of years? There is a lack of proportion between the insignificant mankind still presented by our catechisms, and the massive mankind which science tells us about ....[20]

Teilhard argues that this relationship (between a scientific worldview – which might accommodate an omega – and the individual of Christian doctrine) was foretold by Christ: *I have yet many things to say to you, but you cannot bear them now. When the Spirit of truth comes he will guide you into all the truth (John 16. 12-13).* One

day there will be an increased awareness. The individual human will be urged on by the Spirit into the totality of Truth, Christ the Omega. Teilhard claims that perceived materially as universal centres or poles the omega point of science and the revealed Christ coincide. However in their mode of action Teilhard queries whether in fact they can be identified with one another. This is the core of the religious problem and for Teilhard the prospect of a new theology.[21]

The function of Christ is two-fold. It is redemptive – rescuing humanity from the abyss of sin, suffering and spiritual blindness. It is also a genesis wherein humanity is restored and reinstated:

> Can one, without distorting the Christian attitude, pass from the notion of *'humanization by redemption'* to that of *'humanization by evolution'* ? [22]

Teilhard believed that one could do so:

> Surely this 'Omega Point' ... is the ideal place from which to make the Christ we worship radiate – a Christ whose supernatural domination ... is matched by a physical power which rules the natural spheres of the world. *'In quo omnia constant.'* ('In him all things hold together.' Col. 1. 17.)[23]

Teilhard reveals clearly in this argument the influence St Paul had upon his thinking. Pauline theology and spirituality resonated with him. It is significant that despite struggles with his Jesuitical grounding in Christian dogma Teilhard places Christ irrevocably, not 'up there' in some fanciful realm, but at the heart and goal of the evolutionary process.

In what light therefore does Teilhard regard the historic, the human Jesus? For him the crucial fact was that the earthly life of Jesus initiated a progression of rich fruitful development in the human perception of the world. This is revealed in the ability to absorb and "...accommodate whatever fresh discoveries might be made in whatever field of human endeavour .... (I)t was essential to hold on to the reality of Christ's sheer humanity." [24] In Teilhard's words:

> The more ... we think about the profound laws of evolution, the more
>
> _____ . If it is indeed true that it is through Christ-Omega that the universe in movement holds together, then, correspondingly, it is from his concrete germ (*that is, material source: author's comment*), the Man of Nazareth, that Christ-Omega (both theoretically and historically) derives his whole consistence, as a hard experiential fact.[25]

Whilst insisting upon Jesus' full humanity and historicity which is vital – the man for others, the man of relationship, personal and human as God means all mankind to be – for Teilhard the Christ of faith is much more. As Corbishley asserts:

> (This is) ... because, in virtue of the divine nature operative in and through the purely human qualities of mind and body, ... the achievement of the son of Mary is something that is at least conterminous with the whole range of created history, in space as well as time.[26]

Without the human and divine historic Jesus as a starting point all the accumulated mystical energy within the two thousand year old 'Christian phylum' (Teilhard's phrase) would dissipate into unreality. "Christ born of the Virgin and Christ risen from the dead: the two are one inseparable whole." [27]

Teilhard perceived a profound correspondence between the pattern of the two confronting Omegas, the one postulated by modern science and that of Christian mysticism:

> Christ would not be Paul's Consummator had he not taken on the attributes of the pole at whose peak the progress of evolution must finally converge.[28]

What however are the attributes of the pole at whose peak the progress of evolution will converge? What is the mode of action to which reference was made earlier (see p. 43)?

T. Corbishley claims that point Omega may be perceived in two ways: either it represents an unrealized, ideal state of affairs, or a present reality. It is the culmination of the time-space process or it is:

> ...the eternal, ever-active Being drawing that same process onwards towards its fulfilment, which will be realized in him. For, as Teilhard insists, ... the whole evolutionary process is meaningless unless it is seen in terms of personal activity and personal achievement.[29]

The notion of evolution being drawn upwards is Teilhard's own:

> ... under the pressure of facts, I witnessed a reversal of the values. The world does not hold together 'from below' but 'from above'. Nothing is seemingly more unstable than the syntheses gradually effected by life. And yet is in the direction of these fragile constructions that evolution advances, never to fall back.[30]

Contrast this argument with that presented in Chapter 2, p. 31; the apparent upward thrust of evolution and man as 'the axis and arrow' (see p. 29). Teilhard was aware of the role of chance and improbabilities in evolution (see pp. 31-32). Is he now contradicting his scientific perceptions? Could it not be that there is a dual action here – a working-out from within and below – process mode – as well as and together with the drawing-on from above – transcendent mode? This is a profound development of Teilhard's thinking:

> By its gravitational nature, the Universe, I saw was falling – falling forwards – in the direction of Spirit.... Matter was not ultra-materialized as I would at first have believed, but was instead metamorphosed into Psyche.[31]

It is Teilhard's Christ-Omega who is the origin of this gravitational pull; the Christ who draws all mankind to himself to make it one (John 12. 32). Herein is Christian unity, the total human solidarity which as B. Delfgaauw argues can only come about through love for a person.[32] The unifying love which makes us one is that for the person of the human and divine Jesus. It is the universal, cosmic love of faith available to all creation. Teilhard's vision of an "...immense onward and upward movement manifested throughout history..." is one which clearly transcends the dualism of matter/mind, body/spirit, God/devil.[33]

Whilst emphasizing the transcendent mode Teilhard affirms robustly the immanent process mode when he had occasion to refute the charge of heresy:

> Early in his work he took occasion to protest that pantheism in the sense in which alone it is heretical was very different from his own insistence upon the universal presence and sustaining energy of God.[34]

Teilhard makes a clear distinction between pantheism (the direct identification of God with his creation) and his own view of God as immanent:

> ... in the case of a *convergent universe* as I have presented it, who can not see that, far from being born of the fusion and confusion of the elementary centers it assembles, the Universal Center of unification (precisely in order to fulfil its motive, collecting, and stabilizing function must be perceived as pre-existent and transcendent. A very real "pantheism" ... but absolutely legitimate, since ultimately, if the reflective centers of the world are really "one with God", this state is not obtained by identification (God becoming all), but by the differentiating and communicating action of love (God all *in all*) – and this is fundamentally orthodox and Christian.[35]

Here in a synthesis of transcendent and immanent love energy is 'Christ the evolver'. The universal energy, which Teilhard insists must be a thinking energy – a transcendent form of personality, is that which sustains and urges on the progress of life, of hominization:

> ... since everything *in the universe beyond man* takes place within *personalized being,* the final divine term of universal convergence must also ... possess the quality of a person (without which it would be inferior to the elements it governs).[36]

Humanity, the 'axis and arrow' of evolution, within the cosmos is in the process of becoming increasingly personalized. Here perhaps lies the key to Teilhard's view of human distinctiveness:

> For Teilhard, the Creator Spirit dwells on the inside of creation, in the very process, not in the gaps, the Spirit startling each creature into a realisation of their full potential! And if that is true of the material and animal world, how much more true of our human world, gifted as it as with awareness and recognition, consciousness and imagination: all signs of a personhood that reflects the very personhood of God.[37]

3.3 *The Personalization of Humanity*

Within the successive stages of Teilhard de Chardin's thesis of evolution (cosmogenesis, biogenesis, noogenesis, Christogenesis (see Chapter 2, p. 30) *Homo sapiens* emerges first biologically then, with the development of intellect, spiritually. According to Teilhard human beings become gradually more hominized, more truly and totally human within the progression. This phenomenon in turn is brought about by a process which he calls *personalization*:

> The irreversible process that brings us together in some organic unity must not detract from but heighten our *personality* .... We often speak of a person as though it represented a form of total reality that is quantitatively reduced and qualitatively weakened. We should understand it in a directly opposite sense. The personal is the highest state in which we are able to apprehend the stuff of the universe.[38]

Teilhard's interpretation of person represents more than a passing reference to an individual human being. Personalization comes about with a deepening of consciousness; a development of the whole personality or character; becoming totally and most truly human both as an individual and, more significantly, in solidarity with all humanity. This clarifies a statement of Teilhard's which might seem contradictory (see Chapter 2, p. 34 and note [29] above). His view of the development of personality was not the usual sociological view. It represented something more profound. Personality was not to be regarded in the light of individual advancement or achievement only. Rather this higher state of self-awareness assists the totality of human development when in relating to others (and to a personal God) we become most truly ourselves. Teilhard uses the word *centration* to describe the higher state of self awareness: "... a general process of being that is folded back on itself, interiorized and unified" (S. Cowell (2002), *The Teilhard Lexicon*, 23). As a consequence of this curve backwards and within, human beings are capable now of steering their own evolutionary process. This explains Corbishley's comment (p. 37)

that for Teilhard man is the meaning of evolution, not as regards the process rather as process-producing man. It is by active participation in this process that humans discover their distinctiveness (see C. E. Deane-Drummond, 'Editorial' in *Ecotheology, Vol. 10, 2, August 2005,* 142*).*

The argument progresses further. Teilhard refers to *monads* – centres of individual consciousness (another word for souls perhaps?). He describes the ascent of a multiplicity of such centres attracted by the point of unity. The rise of this consciousness has culminated in reflective freedom and the emergence of religion:

> Religion ... represents the long disclosure of God's being through the collective experience of the whole of humanity *God reflecting himself personally on the organized sum of thinking monads to guarantee an assured success and fix precise laws for their hesitant activities. God bent over the now intelligent mirror of earth to impress on it the first marks of his beauty.*[39] *(Author's emphasis.*)

This statement is significant. Almost it is, for Teilhard, the nearest approach to a discussion of *imago Dei* in relation to humanity – though he does not use the phrase 'image of God'. In a sense it would be inappropriate for him so to do. His vision of humanity in relation to God is so dynamic, so holistic that he could not perhaps define the relationship in static terms of 'image'. Teilhard relates humanity not to an 'image of God' but to God himself.

Was Teilhard de Chardin over-optimistic in his view? How did he justify his beliefs? He was essentially a pragmatic man: his faith was robust. He argues that for the Christian a three-fold faith depended upon a recognition of God and his relation to the universe. The universe represents the "...personalizing unification in God of a tenuous mass of souls, distinct from God, but in subordinate dependence upon him ... by incorporation in Christ ... through the building up of collective humano - Christian unity (*that is, the Church, the Body of Christ*: *author's comment*)". [40] The three-fold faith which appends from this recognition is defined as:

1. Faith in the (personalizing) personality of God, the focus of the world.
2. Faith in the divinity of the historic Christ (not only prophet and perfect man but also object of love and worship).
3. Faith in the reality of the Church *phylum,* in which and around which Christ continues to develop, in the world, his total personality.[41]

Generally the universe is perceived as a vast source beneath which our spirits are crushed, our personalities engulfed or lost. Teilhard's conviction was that " ... if there is life ahead of us, and irreversibly so, this living being must culminate in a personal being, in which we are to be 'super-personalized'." [42] The elements which are to be super-personalized are our souls.

Scientists ask how we can know this. Where is the empirical evidence? How can we be aware of God in our world, much less relate to him? Teilhard responds that there is a depth of subjective knowing which cannot be attained by reasoning or any other human quality:

> It is a gift, like life itself, of which it is undoubtedly the supreme experimental perfection .... To experience the attraction of God, to be sensible of the beauty, the consistency and the final unity of being, is the highest and at the same time the most complete of our 'passivities of growth'. God tends, by the logic of his creative effort, to make himself sought and perceived by us ....[43]

T. Corbishley comments that knowing God is not a direct intuition. God reveals himself to us through the medium of his activity, his work. When regarding a picture or listening to a work of music we are aware only of the colours, the shapes, the sounds. "It requires a different sort of effort to be conscious of the painter, the composer...." [44]

For Teilhard believing is not seeing:

> From what I have just said about my conviction that there is a divine personal term to universal evolution, it might be thought that stretching ahead of my life, a bright and serene future can be distinguished.... The reality is very different .... Certain though I am ... that I must press on in life as though Christ awaited me at the term of the universe ... (a)s much as anyone ... I walk in the shadows of faith.[45]

In order to justify the existence of these shadows of faith the Roman Church (at that time) explains that God hides himself deliberately in order to test our love and trust in him. Teilhard refutes this notion emphatically. To his mind the shadows are an instance of the problem of evil. This was an issue that perplexed Darwin, one for which he could discover no resolution. Teilhard accepts evil as an inevitable part of a creation which develops within time. God does not hide himself deliberately:

> With your own creatures, God, standing before you, lost and in torment, clamouring for help – and when all you have to do to make them hasten to you would be to let one glance from your eye fall upon them ... can I believe that you would not do so?[46]

In Teilhard's opinion, our doubts and misfortunes are "...the price we have to pay for the fulfilment of the universe, and the very condition of that fulfilment." [47] Few analyze the working-out of their faith and the mechanisms by which they believe to this extent. It is a mark of the essence of the man, his humility and profound spirituality that he does descend so deeply into the wellsprings of God.[48]

Teilhard recognizes that there is more than one aspect to the problem of evil. He defines four facets:

1. The evil of disorder and failure: in a universe which proceeds through the operation of chance there are bound to be many failures before a single success is achieved
2. The evil of decomposition: sickness and corruption are understood by Teilhard to be the result of accidental misfortune only. Death is the essential cog in the mechanism and rise of life. It is an indispensable condition for the production of new individuals from the decay of the old
3. The evil of solitude, anxiety and anguish: we do not fully understand the

universe in which we live, consequently we are uneasy and disturbed about our relationship to the cosmos and within that our failure to relate satisfactorily with others and with God

4 The evil of growth: Teilhard claims that all progress towards unity translates into work and effort.[49]

He does not equate these forms of evil with sin, moral wrong – a deliberate turning away from God. The cosmos is enfolding, becoming more interiorized and at the same time it is one which toils, sins and suffers:

> Physical suffering and moral wrong, tears and blood, are just the many by-products (often precious ... and able to be re-used) generated by noogenesis along the way.[50]

For Teilhard it was a mark of increased hominization to be sensitive to and to deplore the pain and suffering in the world. It is the mark of a true human (see Chapter 2 p. 32 above). As C. E. Raven comments:

> It is natural that man as he grows into fuller sensitiveness should be more deeply aware of the pain and evil of his state, of the seeming indifference of the universe, of the cruelties and devilries of human behaviour, and if he is honest of his own frustrations, failures and shame.[51]

Teilhard was familiar with suffering, both mental and physical anguish. He had experienced pain and despair during his World War I service. Nevertheless trauma had engendered in him an indomitable faith in the sacrificial nature of the cosmos.[52] Suffering properly accepted could be both redemptive and a source of potential energy:

> In suffering the ascending force of the world is concealed in a very intense form. The whole question is how to liberate it and give it a consciousness of its significance and potentialities .... All the sufferers of the earth joining their suffering so that the world's pain might become a great and unique act of consciousness, elevation and union.[53]

All too often those who are sick believe themselves to be a burden, to have their dignity and status reduced. They feel useless, no longer of value. This is not

Teilhard's view. "...The crucified Jesus ... is not rejected or conquered. It is ... he who bears the weight and draws ever higher towards God the universal march of progress." [54] Moreover Teilhard claims that there is:

> ... a wonderful compensation by which physical evil, if humbly accepted, conquers moral evil .... (N)o attitude allows the soul to expand more freely, than to open itself, generously and tenderly – with and in Christ – *to sympathy with all suffering, to 'cosmic compassion'.* [55]

Here is the redemption and sanctification of physical evil. It would be comforting to believe that one day science and civilization might eliminate the transitory conditions of suffering and wickedness. However, as Teilhard says, we should be more realistic and accept that in this world we are in it on a cross. It is through the cross, through Christ and the sanctification of suffering that the world's pain can be utilized.[56] This is the ground for Teilhard's optimism, the ground for Christian hope.

It is true that today in the face of so much horror – two world wars, the nuclear threat, Fascism, Nazism, Communism, ethnic cleansing, terrorism – one might begin to wonder whether "... faith, hope and charity have been replaced by fear, despair and denunciation." [57] C. E. Raven claims that it is perhaps Teilhard's greatest service to our time that " ...having accepted the whole cosmic process as one, continuous, complexified and convergent, he can regard it with an unfaltering hope."[58] For Teilhard it is precisely because Christ is both in the world and at the culmination of the world that there *is* hope. Surely therefore we as Christians can do no less than to embrace and proclaim such hope. Teilhard's view of the distinctiveness of the human being is summarized in his 'credo':

> I believe that the universe is an evolution.
> I believe that evolution proceeds towards spirit.
> I believe that spirit is fully realized in a form of personality.
> I believe that the supremely personal is the universal Christ.
> ... Today I would say, "I believe that *in man*, spirit is fully realized in person.[59]

A universe which gathers itself together, which is complex and reflective, is one which is patient of union. If that is so then the cosmos is no longer indifferent and alien:

> As though by magic our terror of matter and man is transformed, is reversed into *peace and assurance* – and even (for the man who knows the bliss of realizing that if a centre of cosmic attraction is to be personalizing, it must itself possess its own super-personality) *into existential love.* At last we have emerged from the labyrinth. We have emerged from our agony. We are made free. *And all this because the world has a heart.*[60]

That heart is God-Christ, the alpha and the omega. Within the love of the personhood of the Trinity we too are persons. We are distinct.

Summary

With the development of his thesis regarding the biological emergence of man, Pierre Teilhard de Chardin realized that there were implications for his Christian faith. He challenged the traditional doctrine of creation and could find no place for Adam or indeed any single biological couple. Nor could the full weight of human original sin be imputed to one single being or couple.

At a critical point in human evolutionary development (that is, the emergence and increasing spiritualization of intellect) Teilhard discovered that the question of God arose, more vital and more necessary than ever before. Teilhard argued for a God of evolution; one who was the origin of the evolutionary process; one who worked within that process and one who was the cosmic point or pole at which the process will culminate. He sought for cosmic unity and in so doing effected a synthesis between his scientific background and his faith – one which is essentially Christian and modern.

Christ is the God of evolution. It was necessary that he should be born into the material world as an element, as a human being, if he was to be the super-personalized transcendent God of the omega point. In Christ's universal love, suffering, pain and sin are redeemed and sanctified. Human beings, becoming more human as the spirit works in and through them – becoming more personalized, discover their distinctiveness. It lies in a personal relatedness both to a dynamic creative God who impresses upon the world the express image of his beauty, and also to one another in human solidarity.

CHAPTER 4

TEILHARD FOR THE TWENTYFIRST CENTURY? CRITIQUE AND IMPLICATIONS FPR ACTION

Pierre Teilhard de Chardin died on 10 April, Easter Day, 1955 in New York after many years of virtual exile. His controversial ideas regarding evolution and humanity became known to his ecclesiastical superiors through his lectures and articles. His radical notions were an embarrassment and in conflict with Roman Catholic dogma at that time.

In May 1940 he completed his major work in which he put together ideas expressed in earlier papers and essays. The importance of this work, *The Phenomenon of Man,* is "... the creative manner in which it situates the emergence of the human as the unifying theme of the evolutionary process." [1] J. A. Grim and M. E. Tucker suggest that the book with its presentation of the four-fold sequence of evolution (see Chapter 2, p. 30) comprises a new literary genre. Nevertheless when Teilhard applied for permission to publish the book his request was refused:

> Teilhard realized that he would never be allowed to publish his work during his lifetime and ... that he would not be granted permission to accept the position (*of the prehistory chair: author's note*) at the Collège de France. Those who spoke with Teilhard ... could sense the frustration that enveloped him as he groped to understand the forces against which he was so powerless.[2]

When his works were published, posthumously, reaction was instantaneous and subsequent controversy heated. There was inevitably divergence of opinion. The publication of *The Phenomenon of Man* was hailed as the book of the year, a revelation. Conversely, there have been hints that the pathos and frustration of Teilhard's later years evoked a sympathetic reception to which the work was not entitled (See Tipler, F. J. (1995), *The Physics of Immortality,* 115). The debate

continues today: evolution or God, science or religion? Currently there is a resurgence of interest in Teilhard's work. Articles have been published on the occasion of the fiftieth anniversary of his death (April 2005), thus bringing Teilhard once more into the realm of public consciousness.

This final conclusive chapter examines a selection of reactions to Teilhard's thesis together with modern thinking on evolution, humanity and God. Some possible limitations of Teilhard's thought are identified and implications for action are discussed.

4.1 *Some Reactions and Responses to Teilhard's View of Humanity, Christianity and Evolution*

Adverse Critique

(i) Possibly the most notorious critique of Teilhard's work is that of P. B. Medawar (published first in 1961). Medawar's impassioned, somewhat hysterical display of histrionics is hardly an impartial or reasoned response. He writes of *The Phenomenon of Man* in a scathing over-reactive way, couched in vituperative terms. It is almost as though he feels challenged personally at a deep unacknowledged level by Teilhard's reasoning. There is a sense of anger, of fear perhaps? He comments on Teilhard's style: "... tipsy, euphoristic, prose-poetry which is one of the more tiresome manifestations of the French spirit".[3] He complains of Teilhard's extravagant use of language:

> ... nonsense, tricked out with a variety of metaphysical conceits, and its author can be excused of dishonesty only on the grounds that before deceiving others he has taken great pains to deceive himself. *The Phenomenon of Man* cannot be read without a feeling of suffocation, a gasping and flailing around for sense.[4]

Medawar's 'distress' and 'despair' are employed to disabuse a potentially gullible public of any notion it might have that Teilhard's work constitutes a good book. Medawar was a distinguished scientist, a popularizer of the subject like S. J. Gould and R. Dawkins, both of whom write for public acclaim. Why this response which in general is neither objective nor measured? If his argument was valid then it would stand, expressed in cool clear terms. His main point appears to be the rejection of any equation of evolution with inevitable progress. He claims that it is widely believed that Teilhard rejected the modern Mendelian or Darwinian theory of evolution. Upon what grounds does he make this statement? It is not so (see Chapter 2, p. 29). Teilhard did not reject Darwinism; he developed and applied it to his own peculiar view of the cosmos. Medawar makes one valid criticism, commenting on Teilhard's claim that the book is to be read not as a metaphysical system, but as a scientific treatise. He argues that it cannot be considered to be scientific where the author "... uses in metaphor words like energy, tension, force, impetus and dimension as if they retained the weight and thrust of their special scientific usage." [5]

(ii) S. J. Gould, an ardent Darwinist and one of Teilhard's most ruthless critics, has insisted that:

> ... the 'cold bath' of Darwinism should have convinced us once and for all that nature can teach us absolutely nothing about what we must do or why we should even aspire to behave: " ... the factual state of the universe, whatever it may be, cannot teach us how we should live or what our lives should mean ....Darwin...liberated us from asking too much of nature, thus leaving us free to comprehend whatever fearful fascination may reside "out there", in full confidence that our quest for decency and meaning cannot be threatened thereby, and can emerge only from our own moral consciousness." [6]

This critique is an attempt to reduce everything to biological process. There is nothing 'out there', nothing that is supernatural. Gould, in his 'Introduction' to C. Zimmer (2002), narrates the anecdote of a prominent English lady who, having perceived the

potential scariness of 'Darwin's dangerous idea' (see below (iii)), expressed the hope that it would not live or at least would not become generally known.[7] For Gould evolution is a cold fact based on direct empirical evidence of the natural world (by observation and study of the fossil record) and on indirect evidence presented by the "...quirks and imperfections present in all modern organisms, that make no sense except as holdovers from an otherwise (... evolved) ancestral state." [8] He reduces man to his true perspective and in stark contrast to Teilhard:

> In evolutionary terms ... humans represent but one tiny twig on an enormous and luxuriantly branching tree of life, with all twigs interconnected by descent .... Moreover, the unique and miniscule twig of *Homo sapiens* emerged in a geological yesterday and has flourished for only an eyeblink of cosmic immensity ....[9]

There is no place for God in Gould's thesis, although he does acknowledge man's unique nature. In his view evolution offers a naturalistic explanation in contrast to convictions of a benevolent creative deity in whose image we are made. Gould attacked Teilhard directly by associating him with the Piltdown Conspiracy (see Chapter 2, p. 26), an attempt to discredit him which was disproved.[10]

(iii) D. Dennett philosopher suggests that evolution is a dangerous notion. The idea of evolution by natural selection "... unifies the realm of life, meaning and purpose with the realm of space and time, cause and effect, mechanism and physical law." [11] Darwin's 'idea' is dangerous because it threatens religious belief, particularly fundamentalism. It could be abused by eugenics – selection for improvement. It relieves us of a sense of obligation to find in our lives greater meaning than the here and now.

Dennett is typical of a number of modern philosopher/scientists who whilst not challenging Teilhard directly undoubtedly oppose the thesis he postulates. Dennett presents an alternative view of human consciousness. He employs evolution

to understand the gradual increase in brain complexity over the last three million years. He applies computer theory to demonstrate how conscious thought is biologically grounded in the brain pathways. He claims that once our brains have built these pathways for the vehicle of thought and language they become literally parasitized by units of culture, replicators called *memes*:

> Human consciousness is itself a huge complex of memes ... that can best be understood as the operation of a ... virtual machine *implemented* in the parallel architecture of a brain that was not designed for any such activities.[12]

It is ironic that Dennett employs in this quotation the sort of novel terminology/jargon for which Teilhard was ridiculed, although he was not the author of 'meme'.

(iv) R. Dawkins first coined the term '*meme*' in 1976. For Dawkins human beings are biological vehicles for the replication, transmission and survival of memes. He claims that God is an ancient idea planted in the meme pool and replicated by thought, word, art and music. The notion survives because:

> ... it provides a superficially plausible answer to deep and troubling questions about existence. It suggests that injustices in this world may be rectified in the next. The "everlasting arms" hold out a cushion against our own inadequacies which, like a doctor's placebo, is none the less effective for being imaginary.[13]

Dawkins displays both a wholly instrumental perception of God and Christian belief and at the same time an implacable hostility – reminiscent of Medawar's worst excesses (see p. 56, above). He would argue that he is not a reductionist. He insists that science tells the truth about the nature of the world. This is all that reduction is. The inflationist puts in ideas, metaphysical, theological, that are unnecessary. They cannot be proven and consequently ought to be discarded.[14] Any hint of progression in Dawkins's view is due to natural selection alone and human purpose is nothing but a product of our evolved brains.

(v) E. O. Wilson in *On Human Nature* demonstrates that the qualities we so much value as being part of our human distinctiveness – altruism, morality, religion, love, hope – are merely survival strategies engineered by our 'selfish' genes. His thinking is similar to that of Dawkins. If we are to continue to survive then hope should be derived from a purely scientific understanding of what it means to be human.[15]

It is significant that Dennett, Dawkins and Wilson employ computer terminology in their descriptions of consciousness and brain processes. Teilhard also was fascinated by computer technology. There are some similarities in the way all four think concerning the nature of consciousness. Is Teilhard's web of thought different from the notion of memes? The difference lies in the fact that Teilhard attempts to effect a sympathetic synthesis between evolution and Christianity rather than taking a polarized view. Both Dennett and Dawkins (who does acknowledge a sense of awe, wonder, humility even and an awareness of spirituality[16]) would however reject completely any suggestion of comparison with Teilhard, precisely because *they do not want* to admit subjective, transcendent notions in their thesis. The type of Christianity that Dennett and Dawkins oppose is that exhibited by fundamentalists. The latter profess a literal belief in creation as defined in Genesis 1-3, robustly refuted by M. Ruse:

> Scientific Creationism .... is intellectual Ludditism of the most pernicious kind. It is a betrayal of ourselves as human beings.[17]

It is dogmatic; it stifles, restricts and does not lend itself to openess to new learning. Teilhard would agree. Creationism is not typical of Christian belief whatever Dawkins might think.

Supportive Critique

(i) C. E. Raven, a contemporary of Teilhard and one of his biographers came to his defence. There are parallels between Raven and Teilhard, though Raven's work is generally not so well known. C. E. Deane-Drummond points out that both sought to effect "... a holistic synthesis of evolutionary ideas with theology .... Like Teilhard, (Raven) believed that the creative process needed to be seen as a whole, culminating in Christ and infused by the action of the indwelling Spirit of God".[18] Raven claims that both Roman Catholics and Protestants recognize the importance of Teilhard's work and are agreed on his honesty. Science is more than simple weight and measurement, more than just mathematics, physics and chemistry.[19] He is just in his estimation of Medawar's appraisal of Teilhard's work:

> Dr. Medawar is in his scientific papers and indeed his broadcasts a clear and precise essayist whose interest is a detailed analysis on physical-chemical lines expressed in polysyllabic and highly professional language and culminating in statistical tables and mechanical diagrams.[20]

- a critique as deadly as any of Medawar's! Raven comments that it is sad for those who have spent many years striving to extend the boundaries of science to include all intellectual life to see "... a brilliant zoologist reverting to these outworn limitations and losing his temper and manners with those who do not accept them." [21] Medawar's critique of Teilhard is dismissed as having no reference or context and no interpretation. Any record of Teilhard's life, character and integrity would refute utterly such nonsense. Medawar writes more temperately in a dedication prefacing Popper and Eccles (1977):

> Only human beings guide their behaviour by a knowledge of what happened before they were born and a preconception of what may happen after they are dead: thus only human beings find their way by a light that illumines more than the patch of ground they stand on.[22]

- an acknowledgement of reflective self-awareness that is almost Teilhardian.

Raven cites a fundamental objection to Teilhard posed by Abbé Louis Cognet which illustrates the limitation of traditional thought. Cognet objected to the breadth of Teilhard's view. In Cognet's opinion Teilhard confuses the natural sciences both with philosophy and theology. His critique reflects a compartmentalizing of life and thought, with no overlap permitted, typical of that time. "This is ... the typical outlook and error which has bedevilled the whole relationship between science and religion ever since Francis Bacon ...." [23] Raven concludes that Teilhard recalls us to St Paul's holistic vision of creation where 'frustration' ('groaning and travailing') is perceived as a divinely ordered instrument for the development of freedom and hope (Romans 8. 18-39). Paul addresses the problem of evil and his answer comes, argues Raven, as the climax of his long account of human and individual salvation. It is expressed in terms of "...a creative process which shall end in the splendour of the freedom of the family of God." [24] There is no compartmentalizing here.

(ii) A. E. McGrath counters Dawkins's thesis regarding reductionism (see p. 59 above):

> The sense of human longing for God ... is not a delusion, to help us cope with the unbelievable pain of a godless world, but a direct result of being created by God. We are made and meant to relate to God and to feel the pain of the absence of God.[25]

McGrath does not use 'creation' in a fundamentalistic way. For him causation is a matter of influence and persuasion; God acts persuasively within the parameters of the process.

(iii) M. Poole goes further and suggests that Dawkins is possessed of a double-edged sword when he uses 'memes' to discredit belief in God, hell, faith:

> For according to 'meme-theory', *dis*belief in God, *dis*belief in hell and *un*belief are also memes which can be accounted for instrumentally, perhaps as desires

> to live precisely as one chooses and to escape any responsibility of a non-temporal kind! [26]

McGrath and Poole whilst not supporting Teilhard's thesis directly are representative of those who take a broad, more positive attitude, sympathetic to Teilhard's ideas. Dawkins and others like him offer a negative approach only (see p. 58, above).

(iv) A measured critique of Teilhard's work is offered by H. P. Santmire. He comments that Teilhard is a theologian of synthesis who attempts to demonstrate the unity of what can be known generally and what can be known particularly through divine revelation. It is a theology of creative union:

> ... a "theological vision of reality," rather than as a theology in any traditional dogmatic or philosophical sense of that word.[27]

In Santmire's view Teilhard was committed passionately to overcome the pessimism and despair which in his opinion were symptomatic of an age of anxiety. He tried to present a forceful, universal optimism grounded in science, metaphysics and theology:

> Teilhard's employment of evolution as a fundamental theme is rooted in earlier intellectual epochs, as the names of those who either directly or indirectly influenced his synthesis will show, thinkers such as Plato, Aristotle and Plotinus; Origen, Augustine, and Thomas (Aquinas); Leibniz, Schelling, and Hegel .... Teilhard's thought about evolution has its roots in this venerable intellectual milieu.[28]

Santmire argues that there is profound tension in Teilhard's thinking. The tension lies between a desire to project a metaphor of fecundity, a world of nature, a universal vision one dominated by a metaphor of ascent, "... with his thought of Christ as exerting influence throughout the whole creation, not just within the realm of human affairs".[29]

Thus there is divergence of thought. Medawar, Dawkins, Dennett and Wilson represent those who will admit a naturalistic view of the cosmos only. Raven, Santmire and others reflect a breadth of considered opinion which is supportive both

of the nature of human distinctiveness and of the type of synthesis between science and religion advocated by Teilhard de Chardin.

4.2 *Possible Limitations of Teilhard's Thought*

Is Teilhard's Thesis Scientific?

In the preface to *The Human Phenomenon* (1999 translation) Pierre Teilhard de Chardin claims that:

> To be properly understood the book I present here must not be read as a metaphysical work, still less as some kind of theological essay, but solely and exclusively as a scientific study.[30]

Was Teilhard correct in his self-assessment? Is his holistic thesis truly scientific? Medawar thought not; nor did G. G. Simpson. For them the book is little more than a poetic description of the evolutionary history of life on Earth. It is not a scientific treatise. Defence for Teilhard comes from F. J. Tipler an eminent modern physicist and cosmologist. He argues that Simpson and Medawar's objections related to Teilhard's proposed mechanism for driving the ascent of life, that is, his two energies – radial and tangential.[31] Teilhard feared that his tangential energy contradicted the Second Law of Thermodynamics. Tipler states that it does not. The First Law of Thermodynamics concerns the conservation of energy. The Second Law is harder to understand. It is a physical law which defines time direction thus implying that the universe has a beginning. It suggests also that the universe is using up all available energy and that consequently it will have an end. It will collapse into entropy; that is - a mean state of diffuse agitation (disorder, chaos) in which exchange of useful energy ceases. This assumes that the universe is a closed system. It would suggest also in terms of modern physics that the universe is not teleological but dysteliological. Tipler argues that there is a way out of this dilemma:

> Not being a cosmologist Teilhard was unaware of the possibility that the universe itself might be closed. And furthermore, that its closure would allow an escape from Heat Death .... (L)ife in a closed universe will be forced, by the very requirement of survival, to converge upon itself and end time in an Omega Point God ....[32]

While Teilhard's notion of tangential energy does not in Tipler's view contradict the Second Law, his concept of radial energy is another matter. Radial energy becomes more concentrated with time and it is apparently this concentration which "... drives the evolution of life to man and beyond". [33] Radial energy could be considered to be analogous to another physical concept – information. If this concept transcends the material world yet is perceived to exist it cannot be said to contradict the physical laws of that material world. Radial energy is not the sort that physicists would in general comprehend. Although it was not possible in Teilhard's opinion to transform material energy into spiritual energy he believed that they were interconnected, held together by something. Ultimately there was somehow a single energy at play in the cosmos.[34]

It could be that Teilhard's thesis is more truly scientific than he realized. There is validity in his intuition. Tipler comments further that it was Medawar who attempted to discredit Teilhard's theory by reference to physics. The mere fact that it is possible to do this demonstrates (according to Tipler) that it is in fact scientific as Teilhard claimed.[35]

Where the theory of evolution is concerned Teilhard's understanding goes further than Darwinism. Santmire suggests that everything for Teilhard hinges on (in Teilhard's words) the 'ascending axis of hominization.' [36] In order to consolidate this point Teilhard deploys a scientific concept – orthogenesis, that is, coming into being in a straight line. Santmire says: "By invoking this contested concept Teilhard seeks to reaffirm the centrality of humanity in the story of evolution".[37] The process of

evolution proceeds gradually, slowly, by infinite steps of trial and error (for Teilhard does recognize natural selection and the part played by chance, see Chapter 2, p. 32). Despite the nature of this groping or cosmic drift (hence the need for time) there is a goal; the coming into being of human life and its ascent toward omega.[38] J. D. Barrow and F. J. Tipler comment that:

> Teilhard ... said he used orthogenesis "... for singling out and affirming the manifest property of living matter to form a system in which 'terms *succeed each other* experimentally, following constantly increasing degrees of centro-complexity' .... Without orthogenesis life would have only spread; with it there is an ascent of life that is invincible." [39]

They claim that there is strong evidence that intelligent life is restricted to one planet, Earth, and that the emergence of humans is a fortuitous accident unlikely to have occurred elsewhere in the visible cosmos.[40] S. Conway-Morris, an eminent biologist/palaeontologist disagrees. Evolution is convergent and teleological. Creatures like us are not the accidents we might appear to be. He demonstrates how complexity on the large scale arises from simple laws on the small scale. In so doing he engages with and poses a challenge to those scientists who would reduce everything to genetics.[41]

The Question of Metaphor

In addition to being branded as non-scientific Teilhard has been accused for his use of metaphor. Santmire explains that Teilhard's integrating theme of evolution is informed at a deep level; deeper than the metaphysical tradition and below that of biological evolution. He says: "As a visionary thinker ... Teilhard is perhaps more consciously aware of the formative function of metaphors ...." [42] S. Appleton-Weber states unequivocably that Teilhard does not use metaphors, only analogy grounded in nature. His work may appear to be metaphorical (for example, his representations

of life's actions of combat and its power of imagination). "But" she argues "in reality, these apparently metaphysical comparisons are the expression of physical and biological structural realities." [43] She goes on to claim that much of the misunderstanding of Teilhard's language and construction is the fault of inaccurate and inconsistent translation in the 1959 edition of *The Phenomenon of Man.*[44] If to use metaphor is to be non-scientific there are others, not least R. Dawkins – whose work is riddled with such constructs – who may with equal justice stand so accused.

J. Bowker in his discussion of the nature of consciousness postulates that God becomes known to us within our own contingent circumstance through the power of metaphor:

> The conducive properties through which God reaches into our humanity may be ... extremely simple. But they are real in effect, and they have consequence in changing the emotional and rational way in which we live. They lead to the life-characterizing metaphors through which God remains independent and yet invites, initiates and creates our union with himself. Metaphor does not claim to describe God, ... metaphors are not similes. They explore what is believed to be true but which cannot be described in direct or resemblance terms. God is not *like* any thing: ... God is always greater.[45]

The question of consciousness is a huge one. New work is emerging almost on a daily basis; metaphysical, philosophical, theological and neurological. For Teilhard consciousness implies every kind of psyche "... from the most rudimentary forms of interior perception to the human phenomenon of reflective thought." It is "... the specific effect of complexity .... The more complex a being ... the more it is centred upon itself, and therefore the more conscious it becomes." [46] Bowker's description (note [45]) is of subjective knowing at a deep level, much in line with Teilhard's thinking. How far consciousness can be reduced to the functioning of neurological pathways, and how far biological structure of the brain is required to support consciousness is not known. Is it possible that just as Dawkins's memes utilize entrances and exits from the brain, so also does God?

Originality

Any reading of Teilhard's work will evoke the question of originality. Is his thesis truly original? His Jesuitical grounding brought him into contact with a wide range of metaphysical and philosophical thought (see p. 63, above). He was undoubtedly familiar with Aristotle's four-fold theory of causation. This included material causes (what things are made of); efficient causes (what past events affected them); formal causes (to what pattern the matter in them conforms); and final causes (towards what purpose or end are things being attracted).[47] Teilhard appears to criticize Aristotelian models based on efficient causes (see Chapter 3 p. 41). He does not acknowledge (in this passage) Aristotle's 'final cause' where something in the future - love – affects the present. If 'final cause' is similar to Teilhard's description of 'omega point' (and also Tipler's 'omega point theory'), why is there this apparent discrepancy on Teilhard's part. Is it a reflection of his understanding of Aristotle or is his own interpretation subtly different? The final cause is teleological. Love is perceived as the final cause of a world in which 'being' is full of potential waiting to grow and develop.

There are other instances where Teilhard deploys philosophical thought. His short 'credo' (Chapter 3, p. 52) owes much to Hegelian philosophy. A. E. McGrath discusses Hegel's view of God and Spirit – an interpretation reminiscent of Teilhard's beliefs:

> God is to be regarded as 'Spirit (Geist)', a term which here conveys the two ideas of rationality and the supernatural. He (or she, or it...) has appeared in and is made known through history. Every religion, in its own different and distinctive manner, is to regarded as an expression of the same basic theory – namely, the 'nature of the Spirit which has entered the world to bring it to consciousness.' [48]

Christianity is different, according to Hegel, because it alone represents the being of Spirit in realized form, that is – the incarnation of Christ, the union of God with humanity.

Nor is Teilhard's concept of monads, centres of consciousness, original. G. W. Leibniz (1646-1716) produced *The Monodology* (c. 1720). According to this work the universe consists of an infinite number of monads - simple substances and nothing else. Monads, active and uniquely different, form a continuously ascending series from the lowest (next to nothing) to the highest (which is God). The term 'monad' is derived from the Greek 'monas' – a unit, the ultimate unit of being. Consequently it seems that Teilhard brought to his own particular thesis a whole armoury of weapons from his philosophical training. What is original is the way Teilhard used these influences to shape and develop a more holistic approach:

> ... as Pannenberg points out, " In Teilhard's perspective there is only one spirit permeating and activating all the material processes and urging them beyond themselves in a process of progressive spiritualization of converging unification towards a centre of perfect unity which in providing the end of the evolutionary process proves to be its true dynamic origin." The ultimate future guides all presents into itself.[49]

Hierarchy in Creation

Whilst human beings are at the leading edge of this process, where does it leave the rest of creation? Does Teilhard sacrifice the material in pursuit of the spiritual ascent? The only way according to Teilhard that the rest of creation, organic and inorganic can participate in the human spiritual ascent is by incorporation within the human spirit or soul:

> At the heart of our universe, each soul exists for God, in our Lord. But all reality, even material reality, around each one of us, exists for our souls. Hence, all sensible reality around each one of us, exists, through our souls, for God in our Lord.[50]

J. A. Grim and M. E. Tucker (2005) express the belief that the deeper relationships between human consciousness and organic matter present an on-going challenge to human understanding. Whilst "... from the standpoint of the empirical sciences, consciousness appears as an emergent phenomen(on) having come from nothing but inert, non-conscious matter ....",[51] it appears that according to Teilhard's thesis consciousness is all that matters and all that is left. Santmire suggests that Teilhard offers an asymmetrical dialectic of creation and redemption where many are created and few are redeemed. He contrasts Teilhard's thesis with that of Barth. He queries whether it would not be possible in a Barthian mode for example to perceive God electing both nature and humanity in Christ:

> Would it be impossible to picture a community of many creatures, not just persons, gathered in the ark of eternity ...? Would it not be possible in a Teilhardian mode, to envision the line of complexity-consciousness not as *the* axis of universal cosmic history, but as *one* line, *prima inter pares* surely, but still one of many lines of creaturely emergence, each with its own eschatological value? Could we not see the tree of life coming to fruition with many branches, not just one? [52]

Santmire's argument exposes a significant gap in Teilhard's thesis, although the vision he defines above is worthy of the man himself. Grim and Tucker identify further limitations in their comprehensive list:

1. Teilhard's over-emphasis on technological achievements (particularly computers) as a sign of progressive evolution
2. the fact that he seemed unable to consider the implications of nuclear waste and pollution
3. his overly-optimistic faith in science and technology - the possible consequences of genetic advances
4. his lack of ecological insight
5. his understanding of other world religions; for Teilhard Christianity is

> perceived as the axis of human evolution.[53]

These are unfair criticisms. No one person can be expected to address all the issues. Grim and Tucker believe however that human creativity in Teilhard's view derives from "...a passionate dedication to meaningful work and productive research informed by the renewing dimension of the arts and cultural life." [54] In other words, as Santmire suggests (note [52] above), visions require action to bring them to reality. Humanity as a whole has a responsibility for the progress of the entire created order. There is an obligation to take an active part in the process of evolutionary development.

4.3 *Toward the Future: Implications in Teilhard's Thesis for the Practical Exercize of Human Distinctiveness in Relation to the Natural World*

One of Medawar's final comments in his critique of Pierre Teilhard de Chardin seems to imply that Teilhard was at a loss regarding 'the Human Predicament', that he did not know how to tackle despair, hopelessness and anxiety:

> Instead of wringing our hands over the Human Predicament, we should attend to those parts of it which are wholly remedial....[55]

Medawar was wrong. Teilhard de Chardin was a Jesuit, a missionary fired with zeal and a need to act. The notion of centration of human persons – increasing recurved complexity/consciousness – means that humans are now potentially capable of creating a global community by active participation in the evolutionary process. Teilhard's sense of the totality/wholeness of cosmos produced in him a conviction of the solidarity and unity of the world and also the method and scope of man's participation in it. Raven argues that he saw humanity in terms of vocation and ministry to the wider community: "... everyone who contributes by thought or labour

to the welfare of the community belongs to a "holy order", a priesthood with a special and sacerdotal function".[56]

Teilhard was profoundly concerned for the unity of human knowledge with regard to the sciences. He believed that the various departments of empirical science would one day come together to form a single natural science centred on "... man the knower and man the object of knowledge." [57] Teilhard wanted more interdisciplinary co-operation and overlap, a reaction perhaps against the rigid compartmentalization of his time.

Following his discussions with Julian Huxley (see Chapter 2 pp. 33-34) plans were outlined to take their ideas further. In March 1951 Huxley presented Teilhard with reports outlining a scheme for a brains-trust to examine human ideology. Teilhard responded with a proposal for the establishment of an *Institute for Human Studies*, a research centre for the study of human self-evolution with two branches, theoretical and applied. The theoretical branch would concentrate on the search for empirical evidence of man's progression towards increasing consciousness whilst the applied branch would address energetics, eugenics and ways forward. Huxley's plan was similar. Both recognized the importance of socialization of man, the need for synthesis, the appearance of new thresholds of progress and the application of scientific method to the study of phenomena in an objective way.[58] C. Cuénot writes: "...While Huxley, without rejecting Christianity or theology, believed that science can replace the older mystical concepts, Teilhard believed that science can be used to strengthen them." [59]

In October 1954 Teilhard together with Julian Huxley was present at a symposium organized by Columbia University in honour of its bicentenary. The subject for discussion was the unity of human knowledge. Teilhard comments thus:

> In my section a deep and vital cleavage plane became apparent between the humanists and the scientists, which turned ... on the new Galileo question: Is man still moving biologically upon himself? With Huxley and the majority of scientists I ... vigorously attacked the immobilist position taken up ... by the more Christian-thinking members of the section.[60]

Little progress was made. Teilhard's ideas were criticized strongly by E. Gilson, a noted historian of philosophy. He claimed that Teilhard's cosmic Christ was one in whom no scientist could believe. There was too much para-science in Teilhard's thesis in proportion to Christian wisdom. However Gilson, for all his criticism, acknowledged the transparent integrity and holiness of Teilhard de Chardin. "(H)e did not forget the priest sunk in his breviary ... Under the continual flow of scientific or other alluvions, he kept intact ... the nugget of pure gold which was the piety and faith of his childhood." [61]

Although Teilhard was unable to make any significant progress regarding his scheme for human studies he believed profoundly that action is our duty. J. Haught (2005) cites Teilhard's words:

> Why act – and how to act? ... So long as our conceptions of the universe remain static, the basis of duty remained extremely obscure ... In a spiritually evolutionary scheme of the universe ... the answer is quite simple. For the human unit the *initial* basis of obligation is the fact of being born and developing *as a function of the cosmic stream.* We must act, and in a certain way, because our individual destinies are dependent on a universal destiny.[62]

This suggests that the basis of our obligation to act lies in the recognition of the totality of humanity. We must play our part; we cannot exist purely as individuals. We need to relate both to the rest of humanity and to God. Right action flows from a right understanding of the nature of the cosmos according to Teilhard's threefold plan: "... the organization of research; the concentration of research on the human object; and the conjunction of science and religion." [63] For Teilhard the future of the universe hinges on the proper exercise of human freedom. Only through the right use of human consciousness will evolution ascend to its next level. "In theological

terms, the kingdom of God will not come unless humans consciously work to make it come." [64] Moreover this is something we have to choose to do, consciously:

> Like children come of age and workers who have grown "conscious", we are in the midst of discovering that something is developing in the world by means of us – perhaps at our own expense. And even more serious, we are now aware that in the great game we are engaged in, not only are we the players, but the cards and the stakes as well. If we get up from the table, nothing will go on. And there is nothing, either, to force us to stay seated. [65]

Let Teilhard's prophetic warning be the final word.

Summary

Pierre Teilhard de Chardin had many critics and has still. Opinion is divided. Some hailed his work with great enthusiasm as ground-breaking. Others found it risible. There were a few who offered measured and thoughtful appraisal.

There are several metaphysical and philosophical influences to be detected in his writing from Aristotle and Plato to Leibniz and Hegel. This reflects his training as a Roman Catholic Jesuit priest.

Careful reading of his work highlights certain limitations in his thesis. Perhaps the most significant is his apparent abandonment of the rest of creation whilst human beings continue their ascent.

The centration of humanity, increasing complexity-consciousness, means that human beings are distinct in that they are capable of participating in and steering their own evolutionary process. Consequently there is a basis of obligation to act morally.

CONCLUSION

> *He has made known to us in all wisdom and insight the mystery of his will, according to his purpose which he set forth in Christ as a plan for the fulness of time, to unite all things to him, things in heaven and things on earth.*
> *Eph. 1. 9-10.*

In today's world, faith and reason are perceived frequently as polarized functions. This is not a true perception. Faith and belief are not separate or distinct from reason, but are rooted in it. Science may be a key to unlocking how we think about God, about the relationship between different cultures and religions and about the processes of the human mind that influence our behaviour. When rationality and faith are viewed as complementary a new understanding of human consciousness may serve as a basis for resolving conflicts between religions and cultures.

It is this sort of systematic synthesis which Pierre Teilhard de Chardin sought to effect. Thus his contribution to the on-going debate is placed in context. J. Newson presents a comprehensive resumé:

> The two poles of Teilhard's thought were his profound Christian faith and his fascination with matter: a concern with the underlying and eternal unity, and with the transience and plurality of the world around him. It was from a life-long and personal synthesis of those two extremes of his experience that his ideas were formed. His thought is essentially Christian, but it is also modern, with its dynamic and evolutionary perspective and its insight into man's place in the scheme of things.[1]

Teilhard conceived a holistic dynamic thesis, underpinned wholly by evolution and from which humanity emerges – and ascends. Like Darwin, Teilhard acknowledges the biological mechanisms (natural selection, chance) by which humanity has evolved. There is divergence however with regard to the place and goal of humanity. Teilhard envisages a cosmos which is teleological, relational, progressive and convergent. The human species is central to the process, the 'axis and arrow' (see Chapter 2, p. 29, note [32]). There is *direction*. That direction is what

Teilhard calls the axis of hominization. He centres this firmly in Christianity, indeed in Rome:

> It is here in Rome we find the Christic pole of earth; ... through Rome ... runs the ascending axis of hominization.[2]

C. F. Mooney, who cites Teilhard here, interprets Rome to mean the Roman Catholic Church. It is possible that Teilhard is sensing in Rome the presence of Christ traced through the Apostolic succession. Consequently he may mean a universal Christianity rather than a denominational one.

God is central to Teilhard's argument. He is the Alpha and the Omega. From the biological evolution of man there has emerged intellect and the power of self-reflective thought dependent upon increased brain-complexity. Intellect is becoming in Teilhard's view progressively spiritualized. Human beings become more human as the spirit works in and through them. For Teilhard this spirit is Christ the evolver.

Teilhard's reasoning – though grounded in traditional Christian doctrine with regard to thinking about the relationship between God and humanity – moves far beyond the notion of man made in some static image of his creator. The characteristic attributes of 'image' are present: reason (rationality), relatedness, self-awareness (consciousness), creativity, and so on (see Chapter 1, pp. 1-8). Teilhard binds these together and centres human distinctiveness in super-reflectiveness and consequently active participation in the evolutionary process. He defines his fundamental vision:

> The essential phenomenon in the material world is life (because life is interiorized)
> The essential phenomenon in the living world is man (because man is reflective)
> The essential phenomenon in the world of man is the gradual totalization of mankind (in which individuals super-reflect upon themselves).[3]

Teilhard has been denigrated for his progressive and optimistic view. He lived at a time when the world was recovering from the horror of two major wars - a time for many of anxiety and despair. This he sought to address. To those who would claim that humanity has no especial place to go, lacking any sort of goal external to its biological nature, Teilhard would respond that we come from God and we move toward God. If evolution simply deteriorates in a collection of steadily weakening branches and sub-branches then it makes a nonsense of the emergence of intellect, creativity and spirituality. Moreover progression does not imply 'better' as some interpret it. Progression is direction and increased consciousness/spiritualization may be used for good or evil. Teilhard acknowledges this: "This is the ultimate ... choice, which will be decisive in determining ... our theoretical and practical attitude to war and peace – to effort and resignation ...." [4]

Teilhard had his doubts and perplexities (see Chapter 3, p. 49) yet he maintained an unfaltering hope grounded in his love of God and in Christ the agent of evolution. Christ for Teilhard is the personal centre, the omega point of history, in which the cosmos will come to completion and unification. This is the Christ who broke through time and space. He was born into our world, human as we are. This was necessary, logical. Christ had to be born into an evolutionary world. Through his death and resurrection he becomes super-personalized and consequently he is ahead of us in the final analysis. Christ is not in some supernatural realm in a different dimension, he awaits us at the culmination of all things and paradoxically is with us also every step of the journey. The universal or cosmic Christ for Teilhard is a synthesis of Christ and the universe. He is not a new godhead, but "...an inevitable deployment of the mystery in which Christianity is summed up, the mystery of the Incarnation." [5] Newson explains:

> In his fully incarnational and sacramental faith, Teilhard saw complexifying matter as the outward appearance of spiritual growth. Together they constitute a cosmic reality, through which Christ manifests himself, until at that final point, Omega, he shall be in all things and all shall be in him.[6]

Thus through Christ God has changed what it means to be human. He reconciles us to himself through Christ. Our distinctiveness lies in our personalization and relatedness to him and to each other.

Does this line of reasoning make Teilhard a vitalist? C. Cuénot appeared to believe so (see Chapter 2, p. 24 note [16]). Vitalism postulates that life originates in a vital principle distinct from chemical and physical sources; an added ingredient not subject to scientific test. Cuénot seems to suggest that Teilhard reduces life to psyche. His argument is reminiscent of Dawkins: life is nothing but information preserved by natural selection. Is it possible to explain the nature of life in terms of physics and chemistry alone? "Although biology involves the same matter, and the same forces, as physics and chemistry, new levels of description are needed to do justice to biological systems." [7] Consequently attempts at reduction of this nature do not succeed, nor is Teilhard guilty of the same. His 'consciousness' / 'psyche' / 'spiritualization', is an emergent property. Life may be perceived as spiritualized *now*, but it should be acknowledged that millions of years of biological evolution have brought us (humanity) to this pass. Consciousness is evolved and emergent. C. E. Deane-Drummond concludes:

> Teilhard ... comes very close to 'vitalism', long resisted by biologists, through his notion of the existence of the cosmic spirit in the natural world, though his clear sense of the transcendence of God effectively steers him away from any such conclusion.[8]

Teilhard's prophetic and holistic vision poses many questions. What precisely does he mean by 'spirit'? Is the psychic spirit of man – the cosmic spirit – to be equated with the Holy Spirit? How far is his holistic theory in conflict with a

more individual approach? Is there conflict? Teilhard claims that the human element in all of us is essentially the same. We have only to search deeply within ourselves to find " ... a common substration of aspirations and illuminations". [9] Through that which is most deeply and incommunicably personal in each one of us we can reach out and make contact with the universal. We should realize that " ... the universe in no way tends ... to crush over individual values but on the contrary to exalt them by its vastness. " [10] Thus we begin with an individual and personal relationship with the God of evolution and through this relationship we are empowered to relate to each other and the rest of the cosmos. The nature of spirit in Teilhard's thesis is another matter, a huge question and one which requires further investigation to resolve.

There have been many critiques of Teilhard's thesis and his work is attracting current attention. More than one commentator has deplored the lack of any feedback. This is unfortunate but not insuperable. Teilhard produced a considerable body of literature: letters, articles, essays, papers and at least one major work *The Phenomenon of Man.* Some, for example P.B. Medawar, appear to have based their critique solely on a cursory appraisal of the latter. To gain insight into Teilhard's thought and the development of his thesis it is essential to read and immerse oneself in much of his writing. It is undoubtedly regrettable that he may no longer be questioned directly. Nevertheless his contribution is there; it stands upon its own merits. We have to make of it what we will. Feedback in the way of personal dialogue with Teilhard is unnecessary.

Limitations of Teilhard's thesis have been highlighted by several authors. For example J. A. Grim and M. E. Tucker offer a comprehensive list of issues which in their view Teilhard failed to address (see Chapter 4, p. 70) and to which they offer no solution. C. E. Deane-Drummond is critical of Teilhard's ideal of progress which

she claims seems to blind him to the ethical dangers in modern technology and science.[11] Is this true? Was Teilhard 'blinkered'? No one individual can address every apparent evil/issue in the world. Teilhard's thought is conditioned by his time. The general way of thinking then was narrow, rigid and compartmentalized. His views are peculiarly his own and extremely focussed. He is passionate about his concepts to the exclusion sometimes of all else. His object is to reconcile traditional Roman Catholic doctrine with evolution (see Chapter 3, pp. 39-40).

Is it conceivable that Teilhard's interpretation of human distinctiveness might be compromised by recent and future scientific discoveries? In *Wonder and Wisdom* (2006) C. E. Deane-Drummond describes the discovery in October 2004 of *Homo floresiensis.* This new human species, much smaller than *Homo erectus* was peculiarly adapted to the confined living conditions of Flores, an Indonesian island. Deane-Drummond queries whether such a discovery undermines the meaning of humans as made in the image of God, *imago Dei.* She concludes not and goes on to warn against too literal an interpretation of the creation account. She claims that the biblical record was never intended to be a scientific treatise. Human distinctiveness is relationship with God grounded in reflective consciousness and citizenship/stewardship of the earth.[12] Teilhard would agree.

It is easy to criticize Teilhard with hindsight. We now are aware of so much more. We have more resources, new ways of communication and broader interpretation. Teilhard cannot have been unaware of the potential threat of atomic/nuclear power, or even the rise of genetics. One has only to consider Hiroshima, the Nazi programme of eugenics and the Holocaust, all of which occurred in his lifetime. He sought to go beyond the evil that self-reflecting humanity can by deliberate choice inflict. He was aware that there exists an axis of evil as well as that

of hominization (see Chapter 3, pp. 50-51). What might he have produced today in the light of genetic and neuroscientific advances, new technologies and ecological developments?

A significant critique is H. P. Santmire's claim that Teilhard's thesis offers an asymmetrical dialectic of creation and redemption; many are created but few are redeemed – only human beings. Does Santmire's visionary description (see Chapter 4, p. 70) detract from Teilhard's view of human distinctiveness? Our God is a God who cares not only for every hair of our heads but also the flowers of the field and every sparrow that falls to the ground. Are we then so elevated in our distinctiveness? According to scripture we have dominion (stewardship, citizenship) over the rest of creation. Consequently in our self-reflective awareness and potential active participation in steering the course of future evolutionary developments there is according to Teilhard a moral basis of obligation to act, to do something about the problems which so beset us. Evolution will not proceed for the better if we choose (and we can) not to act. Action is therefore perceived as Teilhard's legacy. There are implications for research in a wide range of disciplines: artificial intelligence, theology, science generally and ecotheology in particular.

Man's uniqueness lies both individually and in the group. The human group in Teilhard's view demonstrates socialization and personalization. Human intellect/consciousness becomes transcendent as it becomes progressively more complex, more personalized. This notion of personalization which helps to define human distinctiveness is one which Teilhard emphasizes. Personhood flows out from the relationship of the Persons within the Trinity. Human personhood can relate to a God who is Person:

> Crimson gleams of matter, gliding imperceptibly into the gold of Spirit, ultimately to become transformed into the incandescence of a Universe that is Person .... [13]

The relationship between God and humanity is one forged in love. Christian love for Teilhard is the great unifying force:

> With the appearance in evolution of human beings, love enters the realm of reflexive consciousness, of the spiritual.[14]

It is through this love that the human spirit possesses its amazing power to triumph over adversity, to rise above tragedy, to aid the afflicted and to stand alongside those who suffer. This is not sentimental or romantic love but an energy. Could it be that the single energy at play in the universe (see Chapter 4, p. 65), the energy which holds together material and spiritual energies, is in fact the energy of love? For Teilhard the only way that humans can love is completely and finally through a love that embraces the entire universe.[15] This is Christic love; love that entered the world in the person of Christ; love that became super-personalized and which now is poured out upon humanity through the Spirit. By this love evolutionary human beings may be drawn on and into the ultimate power/force at play in the cosmos, the power we call God – the omega of experience converging upon the omega of faith:

> It is ... an inevitable 'implosive' meeting; and its probable effect will soon be to weld together science and mysticism in a great tide of evolutive power – centred around a Christ at last, two thousand years after Peter's confession, identified (by direct extension of his theandric attributes, and without thereby annihilating his historic reality) by the work of centuries as the ultimate summit (that is, the only possible God) of an evolution definitively recognized as a movement of convergence.
>
> That is what I foresee.
>
> And that is what I am waiting for.[16]

25878 words

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